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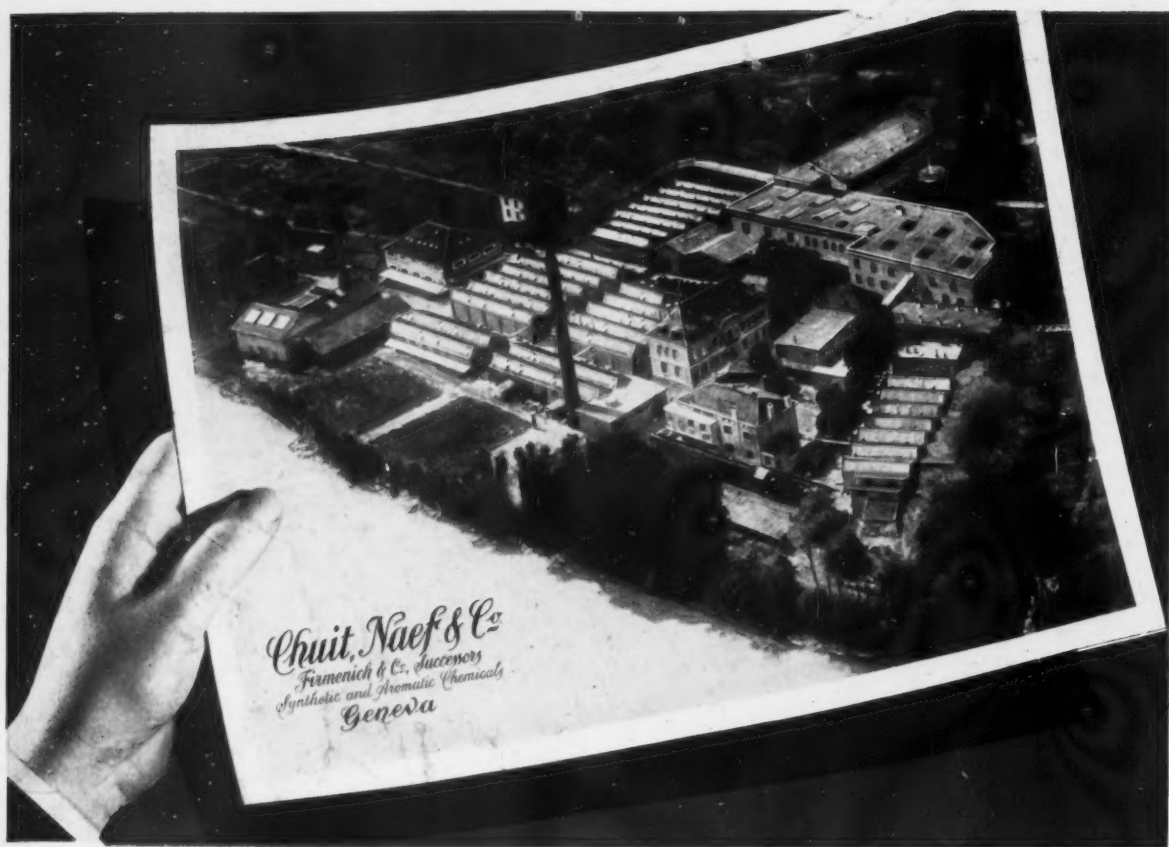
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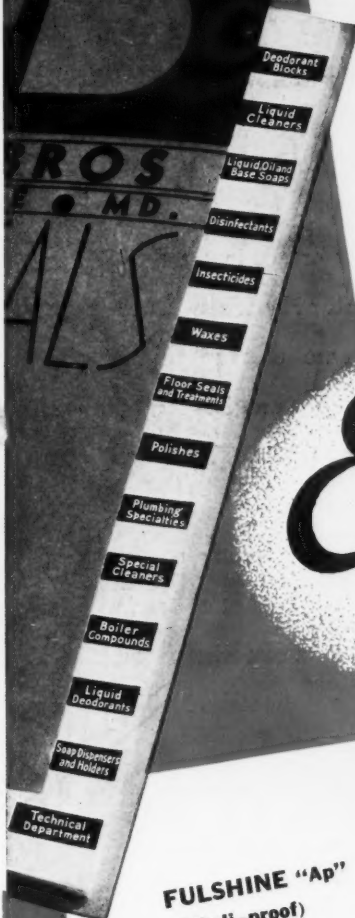
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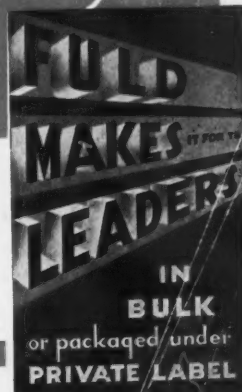
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SOAP

Volume XIII
Number 7

July, 1937



SANITARY Products Section, which is included as a department of every issue of SOAP, begins on page 75. Production Section begins on page 61.



Contents

• Gift Soaps—What's Wrong with Them?.....	21
• Laundry Bleach	24
By Dr. C. A. Tyler	
• Household Ammonia	28
By David D. Catts	
• "Jabon Cochi"	33
By W. A. Mott	
• Medicated Soaps	61
• New Disinfectant Specifications.....	91
• Better Insecticides Thru Research.....	97
By Dr. W. H. Tisdale	
• Specialized Insecticide Test Methods.....	101
By William F. Kroneman	
• Coal-Tar Disinfectants for Fruit Trees.....	102
By Dr. E. G. Thomssen	
• Recent Developments in the Disinfectant Field..	103
By B. G. Philbrick	
• Fair Trade Laws.....	106
By R. K. Hines	
• Consumer Sales Education on Insecticides....	115
By H. A. Thomas	
• Insect Sales Problems.....	117
By H. W. Moburg	
• Contracts Awarded	49
• New Trademarks	51
• Raw Material Markets.....	55
• Raw Material Prices.....	57
• Products and Processes.....	64
• New Equipment	69
• New Patents	71
• Classified Advertising	143
• Advertisers' Index	152

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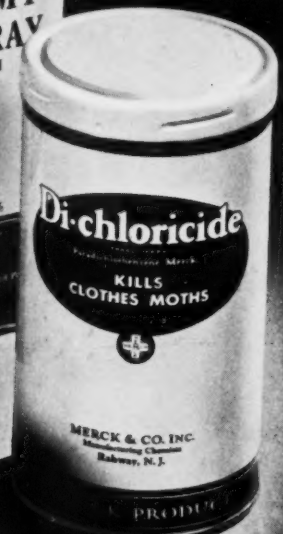
254 WEST 31st STREET

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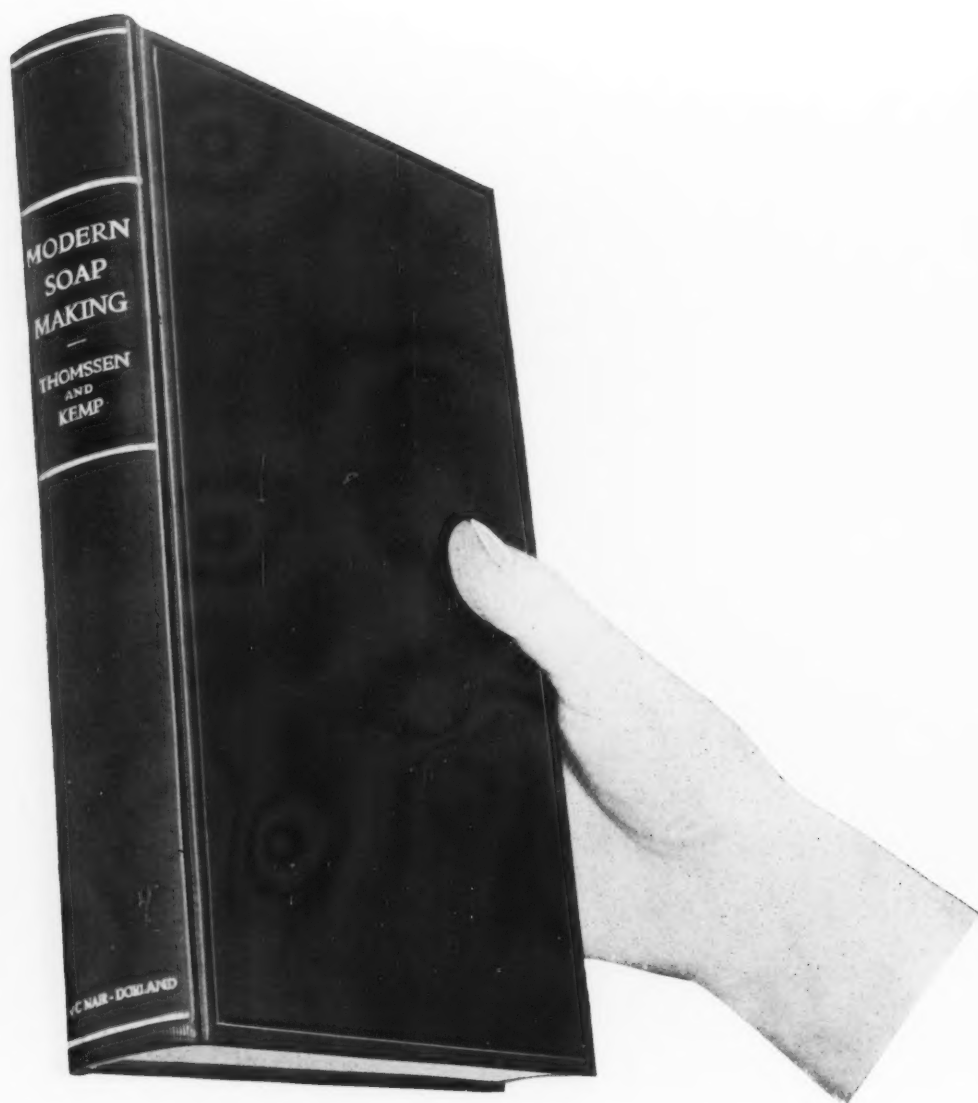
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15

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(Kathryn Glennon, Soap, Nov., 1936)

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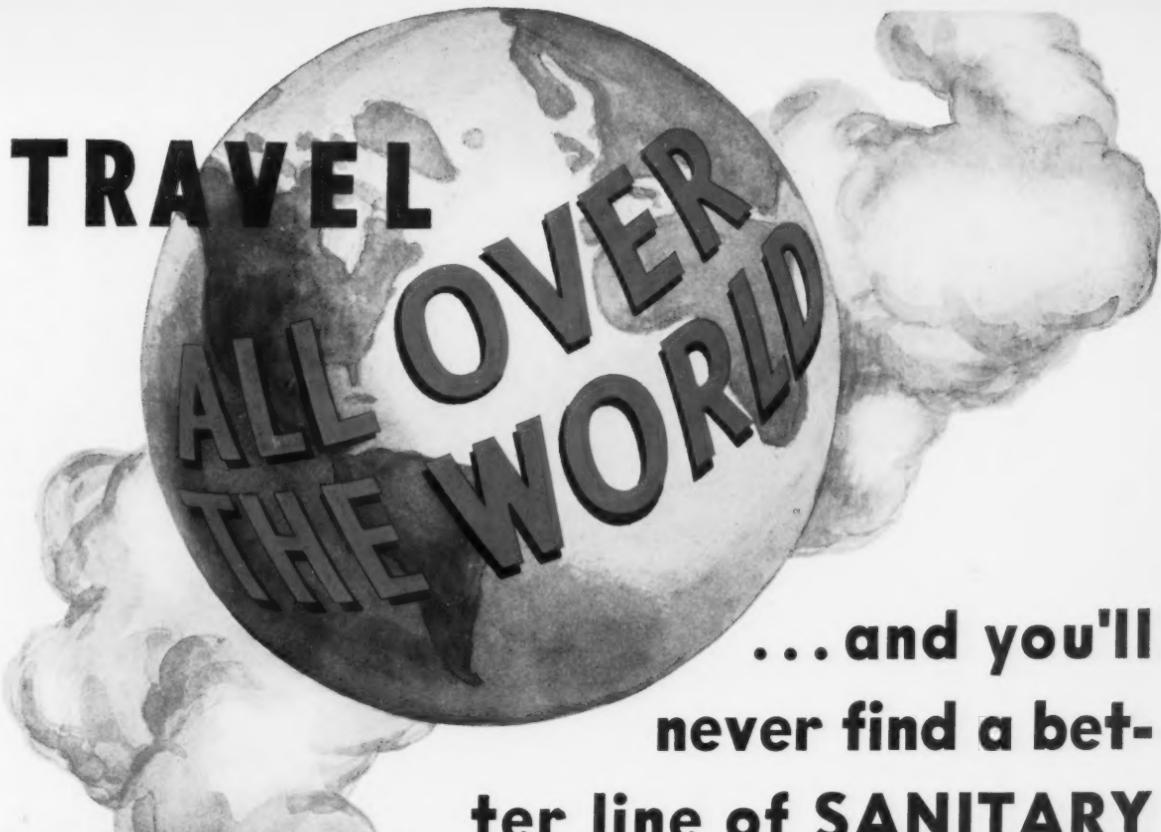
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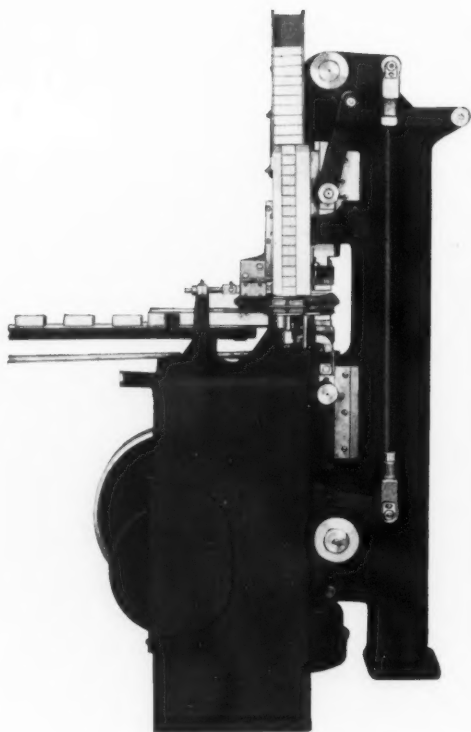
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As the editor sees it

THE seriousness of the labor problem in the soap industry over the past month or two has varied widely in different localities, and with different units in the same locality. Interesting it is to note that those soap companies which in the past have shown a more liberal attitude toward their workers have been least bothered in the present situation. From surface indications, employee representation, guaranteed employment, shorter hours, and a higher wage scale are paying extra dividends right now.

In some instances, labor appears to be well informed in regard to the internal situations in industries which they have attempted to organize. In other cases, they do not seem to be well informed if we may judge by the character of their activities. If the labor organizers are well advised in the case of soap manufacturers, they must appreciate that a difference between forty and fifty cents per hour for a multiplicity of hand operations, may spell the difference between employment and technological unemployment. As has been pointed out before, if the unions press the issue, as they have in some cases, they will force the hand of the manufacturer in increased mechanization with its effect of permanent unemployment in some classes of soap industry labor.

The permanent effects which may come from the present wave of labor agitation in the soap industry are likely to be few. Unions that spring up overnight are just as liable to depart the same way. Some few of the workers in the soap industry who have been underpaid and overworked will profit from the present liberalizing trend, and have their wages and hours adjusted to fair levels, but after the present union hysteria has died down, we doubt if they will want to continue membership in organizations whose principal contribution to them will be the privilege of paying monthly dues.

Having negotiated a settlement of its present labor problems, the average soap company may feel that its troubles are ended, at least for a

time. The best advised employers, however, realize that labor problems are never satisfactorily settled without some sort of a definite, long-range labor program. Some program of employee representation is desirable. Some method of locating superior ability among employees, and rewarding it by advancement, must be developed, labor troubles often being traceable directly to one or two natural leaders who feel that their ability and efficiency have been overlooked. Spreading production evenly over the full year so that year-round employment can best be assured is another desirable feature of any far-sighted labor program. Only when the worker feels a sense of security, can he be expected to feel any particular loyalty toward the firm that employs him.

These considerations must be borne in mind. we feel, in dealing with the present situation. It is not enough to solve the immediate problem. Only a long-term plan will solve the labor problem of the future.



HEARINGS have been held and further hearings are scheduled on the state of the commerce and economics of the Philippine Islands before a committee of Congress, namely, the Joint Preparatory Committee on Philippine Affairs. The next hearing will be on July 21. In the meantime, the Philippine Government has requested that the Treasury Department please hand over fifty million or so dollars which have been collected in the form of an excise tax on Philippine coconut oil sold to American consumers. So, among other things, the committee of Congress will endeavor to find out just what effect this tax has had on the Philippine coconut oil business.

Arguments by those who would like to see the three-cent tax continued, or even increased,

have been presented at Washington. Those who oppose the tax have likewise filed their views on the subject. But, with what has gone before, all this filing of briefs, hearings, and the like, are just so many waste motions, as far as we can see. While another excursion to the Philippines by a congressional committee to investigate the economic state of the Islands, may be the cause for wide grins in Washington. But as far as coconut oil consumers are concerned, the annual tax bill is about twenty million dollars, ten million of which comes right out of the pocket of the soap industry,—and it's not very funny.



SEVERAL large glycerine buyers have been talking to us again about glycerine prices. Just as they were inclined to view with suspicion the high prices which ruled for many a month, they stated that they detect a slightly synthetic aroma in the recent sharp decline. Whereas they admit that the demand for glycerine a short time back very probably exceeded available stocks, and that everybody was afraid that war-scared Europe would drain our supplies, and that producers were deeply concerned over the high level of prices, they also seem to have the notion that prices went down too far too fast. The idea appears to be about that somebody somewhere gave a helping hand to the good old law of supply and demand,—and for a purpose which is not altogether clear at this writing to the aforementioned buyers of glycerine.

With the consumers of glycerine, who during the past year or two have had difficulty in obtaining adequate supplies, we can sympathize. But we are moved to remind them that glycerine is a by-product whose production is limited and cannot be expanded at will by merely installing another set of equipment. Also, it cannot be forgotten that fat costs,—and by-product or not, glycerine must be made from fat,—were up about two hundred per cent at the peak. And as a final thought in this little discussion, we likewise are moved to ask how many buyers sent cards of sympathy to producers, when, a few years back, refined glycerine sold under ten cents per pound.

What has happened in glycerine over the past year is characteristic of the glycerine market. It has happened before, and under similar circumstances, will probably happen again.

AFTER reading in an English soap publication about a month ago that Holland leads the world in soap consumption with thirty pounds per capita per annum, we find in an issue of the *Indian Soap Journal*, which recently arrived from Calcutta, that the United States is first with twenty-five pounds and Holland second with twenty-four pounds. We became slightly downcast when our friends in London relegated the United States to second place behind Holland in the world soap consumption race. Now that our Indian contemporary disagrees with London and corroborates our own figures, we feel greatly relieved.

Other interesting points about soap consumption,—the article, incidentally, was written by Dr. M. N. Goswami of Calcutta University,—which are brought out, include mention of a four-ounce per capita consumption of soap in India and the tremendous potentialities of India as a market for the native soap manufacturer. Incidentally, we mentioned a six-ounce per capita consumption for China in the last issue. If we remember correctly, this should have stated two-ounces and not six,—which means that India uses just twice as much soap per person as the Chinese.

We are still on the trail of accurate figures on per capita consumption of soap in various parts of the world. Sooner or later, we will catch up with these figures, and then this momentous question will be settled once and for all,—we hope.



THE tide of labor agitation appears to be receding. The hysteria which went hand in hand with labor disputes a month or two back, appears to have died down considerably. Even governmental agencies, both state and federal, seem to have come to realize at last that possibly the majority in the ranks of labor would rather work than strike. Maybe they have unearthed the fact, too, that working for one's living is an old American custom,—that we have done it for years and with quite some success,—and that the fellow who wants to work, has the right to work. Maybe also our government has suddenly discovered the other ninety-nine per cent of the population of this nation, and has found out that they are not on strike and do not want to strike. Who knows?

GIFT SOAPS—

What's Wrong With Them?

A RECENT buying excursion through a series of New York department stores by a representative of SOAP gives quite distinctly the impression that the gift soap field is still sadly neglected as an outlet for higher-priced soaps. The buyer who is interested in spending five to ten dollars or over for an attractive gift package can find very little worth considering in the soap line in this price range.

It is possible to buy a large box of toilet soap tablets of a medium grade in the one dollar price range,—a package of this type not being properly classified as in the gift soap field. One package of this type inspected contained 24 four-ounce cakes, of medium quality, perfumed with an inexpensive pine odor. In the same class, are the large boxes of hardwater soap offered by a number of the department stores in annual or semi-annual sales. In these sales there is a definite attempt to move soap in large quantities, but the emphasis is on low price rather than on the luxury of fine perfume and high quality.

When the more expensive bath and toilet cakes, both of domestic and foreign manufacture, are offered, it is ordinarily in a box of only one to four cakes. The usual selling price is in the neighborhood of one dollar for these small boxes of three-and-a-half ounce cakes. Soap manufacturers seem afraid to go beyond this dollar price range, even in the quality soap group. Whether this policy is based on past experience with the soap buying habits of the public, or whether it is merely a result of inertia and set merchandising habits, cannot be

said. It would seem, however, that there should be a definite market for a big box of finely perfumed, high quality soap, the soap being offered in combination, perhaps, with dusting powder, bath salts, bath oil or other items in the bath accessory group.

To attempt a more accurate evaluation of this potential market, it might pay to inquire a little more closely into the psychology of the gift buyer. Everyone who has had the experience of shopping for a gift, knows for himself how the gift seeker feels. He or she has anywhere from one to twenty dollars to spend on the gift that must be selected. There is a strong desire to get the job over with as promptly as possible, and yet the average buyer hates to admit his failure as a gift selector by simply picking out one of the stereotyped gift articles—candy, flowers, correspondence paper, silk stockings, et. al.,—and saying "Give me five dollars worth." How much better it would be to select some unusual item, something that will strike the recipient by its originality as well as its suitability.

Give a buyer of this sort an opportunity to select an attractive soap gift chest at the price range in which he is interested, and he may solve his gift problems for the next six months by buying half a dozen. Soap as a gift item has the particular advantage of being a non-perishable material for most practical purposes. The gift can be bought tomorrow and given next month. It will still be in good order, and if properly perfumed the odor will still last until the final cake is consumed. There is the additional advantage that if the recipient of the soap gift box already has a

cake of soap—or even a dozen—the gift will be equally acceptable. Soap can always be filed away for future use, and will be just as welcome six months from the date of the gift as the day it is bought.

Other than novelty and non-perishability, what are the characteristics that the buyer is looking for in a gift? He or she wants, first of all, to give a luxury item—something of a class higher than the recipient would ordinarily buy for herself out of her own funds. While primarily interested in the quality of the gift selected, at the same time the buyer does not want to sacrifice completely the impression of bulk as applied to the gift. This inherent impulse of the gift buyer explains, by the way, why correspondence paper has over a period of years become so acceptable as a gift item. A gift package of stationery, correspondence cards, and matching envelopes makes an imposing and substantial display, while at the same time allowing the buyer a wide selection in the higher quality brackets even at the five dollar price range.

To illustrate the converse example, consider the gift package of perfume. In the five to ten dollar price range, the buyer can get only a relatively small bottle of the better grade perfumes. Yet in spite of this apparent disadvantage, cosmetic manufacturers have built up their gift trade in perfumes to a substantial volume on a year 'round basis.

A third important influence in the gift market is the question of lasting impression of the gift selected. Other things being equal, the buyer will prefer a gift which will remain in use over an extended period, reminding the recipient pleas-



That the public will buy soap in quantity has been demonstrated convincingly by department stores in their annual soap sales. Is it not reasonable to expect that they would also be willing to purchase high priced soaps in quantity if such packages were offered?

antly of the giver over a period of months or years. This factor explains the desire of many givers to give something "lasting" and the reluctance of many people to give flowers, candy or other perishable items which may be shortly forgotten.

TURNING back to soap once more, it is interesting to check its rating on the various points raised and to try to evaluate what its place should properly be in the gift field. On the point of quality, it must be admitted that, except for a limited few brands, soap does not measure up as a gift item. This does not reflect any inherent inability of soap to classify as a luxury item, however, but is merely a result of

the common practice of turning out a product which *looks* like a quality product, but really is not. It appears that one of the biggest mistakes in the gift soap field has been this tendency to turn out soaps to sell on a price rather than a quality basis. Soaps at three cakes for a dime or three for a quarter do very well for home consumption, but nothing but the best will do for the gift field. To classify in the gift group, a soap must be of the best milled, long-lasting, expensively perfumed type. The gift buyer will not select anything in the soap field unless he can feel secure in the belief that he has chosen a true luxury item.

As for bulk of the soap gift, basically soap has an advantage over

perfume and other gift items in this respect. In the five dollar price range, the buyer should be able to select the highest in quality and still have his gift appear as a substantial and impressive remembrance when properly packaged. The trouble along this line has been the failure of soap packers to offer a gift box of substantial size in the higher price field. A recent buying excursion among the New York department stores revealed not a single large gift package of soap. Such a package should have considerable potential sale at all times of the year,—Christmas, Easter, vacation-time, birthdays, etc. It might be made up of a dozen five- or six-ounce bath tablets, the same number of toilet soap cakes, and perhaps two dozen of the one or one and a half ounce guest size cakes. To this combination might be added bath salts, dusting powder or some other item in the general line of bath preparations,—or the entire box might be soap alone,—a giant gift package of soap,—nothing else.

An attempt was made in the survey of the New York department stores to buy such a gift package of soap, and the universal reply was that no such packages were available, except possibly at Christmas time, when special boxes for the holiday gift trade are made up. A number of sales girls, who perhaps hated to see a sizeable sales check lost, tried to solve the problem by suggesting that the buyer might select from ordinary stock and have the store's gift department assemble a box of soap of the type desired. The success of this attempt can well be judged by the photograph of the assembled gift box as delivered. Obviously, anyone who had ever selected a gift box of soap in this fashion, would never make a second attempt. If there is ever to be any extended sale of large gift soap packages, they must be assembled and packed in specially designed boxes by the maker, not by the department store. Turning to the third gift essential,—lasting quality,—we find that soap measures up well on this point. A good-size gift

soap package will last the recipient for six months or a year, and a high quality, lasting odor will be a daily and pleasant reminder of the source of the gift over that whole period.

BASICALLY, then, it is evident that soap has all of the qualities mentioned as being desirable in a gift item. Failure to develop the potentialities of the gift soap market has been the fault of soap makers and soap sellers, rather than any inherent fault in the commodity itself. Quite obviously, the larger manufacturers of nationally advertised brands cannot bother with this field. It is a market for the smaller firms and the private brand houses.

True, the market for these giant gift soap packages might be small, as compared to the volume on nationally advertised soaps for regular home consumption. But the profit margins would be substantially wider. Then, too, it is worth while considering that the person who uses the more expensive soaps for a time, may with habit become a regular buyer of the higher grade cakes rather than the ordinary "grocery

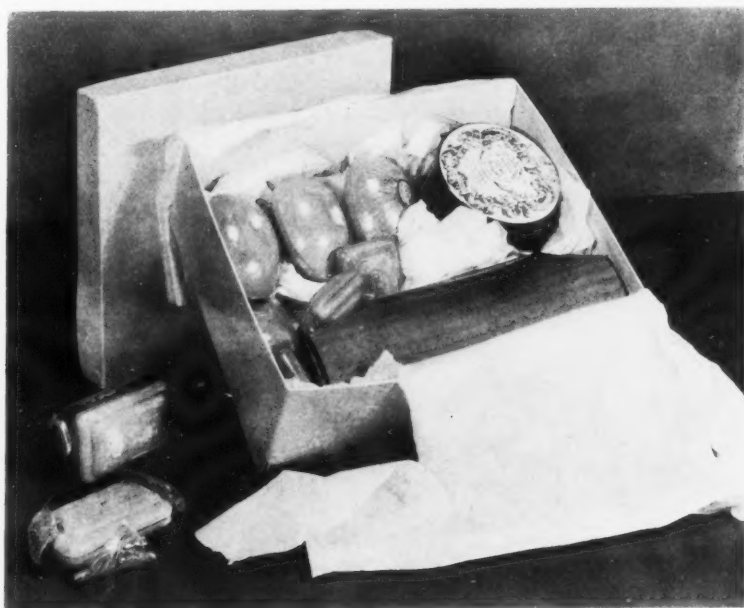
The soap industry seems backward about trying to sell a really sizeable gift soap package. In the higher priced field the usual unit consists of three or four cakes at the most, leaving a large range of the gift field completely lost to the soap trade.



store" brands. With the longer profits on the higher priced soaps, "trading the buyer up" is distinctly advantageous.

From the standpoint of the department stores and other sellers

Department store wrapping of gift soap boxes is an obvious failure. The soap maker must do his own packaging in specially designed boxes or chests if he expects to stimulate sales of the higher priced soaps for the gift trade.



of gift items, it would seem that a soap gift chest such as has been suggested would be distinctly welcome. Soap has been used in so many fields as a loss leader that most retailers who handle the products of the soap industry are somewhat pessimistic about the margin of profit they must expect to take on soaps. A package selling in the higher brackets, and providing a good margin profit, would be distinctly welcome in the department stores, to judge by the comments of department store buyers in the survey recently conducted.

To turn once more to another product not normally considered in the gift field, consider what has been done recently with cheese as a gift item. One of the dairy firms has met with considerable success in offering a large cheese chest,—including a wide selection of the different varieties of cheeses. A ten-pound package of Camembert cheese would not by the widest stretch of the imagination be a gift item, but a sampler, consisting of two or three dozen different varieties of cheese is a proper item for the gift field, and with the additional attraction of novelty is at

(Turn to Page 47)

COMMERCIAL laundry bleach consists of an aqueous solution of sodium hypochlorite. This sounds so exceedingly simple that it seems there would hardly be room for discussion, at least of composition. As a matter of fact, chlorine bleach is quite complex. As is quite generally known, sodium hypochlorite is formed by the reaction of chlorine with caustic soda in water solution. A good commercial preparation for the power laundry should contain from 10 to 13 per cent of available chlorine and from 2 to 10 per cent of free caustic soda.

The chemical reaction by which hypochlorite is formed, is reversible, so that the solution contains all of these substances in a state of equilibrium. It is desirable to control this equilibrium by driving the reaction toward completion, so that as high a concentration of sodium hypochlorite as possible will be present. By adding excess caustic soda, the law of mass action is applied and the desired effect obtained. An increase in the amount of caustic soda added will promote the formation of sodium hypochlorite, so that a 10 per cent excess of caustic is more effective than a 2 per cent excess. Another way of phrasing it is to say that the excess caustic stabilizes the solution. For practical reasons, a limit has to be put on the



Detergent operations in the laundry should be completed before the bleach is added to the wheel. Bleach added to soiled garments is ineffective and wasteful.

amount of free caustic, as too great an excess would give a high enough concentration when used in the laundry to attack the fabrics being treated. Ten per cent of caustic soda should be the upper limit in the concentrated chlorine bleach containing from 10-13 per cent of available chlorine.

Since sodium hypochlorite is a salt of a strong base and a weak acid, it hydrolyzes in the same way that soap does. In this case the products of hydrolysis are sodium hydroxide and hypochlorous acid. The pH of a 0.05 M solution of sodium hypochlorite containing no excess caustic, has been given as 9.7.¹ This shows the degree of alkalinity

of the neutral salt, just as a neutral soap in solution gives a pH in the neighborhood of 10.2. Below a pH of 9.7 a solution of sodium hypochlorite becomes acidic, since excess hypochlorous acid is present. Hydrolysis is shown as:



Hypochlorous acid is always present to a certain extent, due to this hydrolysis equilibrium. It is a very unstable compound and is subject to several forms of spontaneous decomposition, as shown in the following equations:

- 1) $3\text{HClO} = \text{HClO}_3 + 2\text{HCl}$
- 2) $2\text{HClO} = \text{H}_2\text{O} + \text{Cl}_2\text{O}$
- 3) $2\text{HClO} = 2\text{HCl} + \text{O}_2$

In the last reaction, simultaneous oxidation and reduction occur, and

¹G. F. Davidson, *J. Textile Inst.* 24, T185-206 (1933).

Laundry Bleach

By Dr. C. A. Tyler

chloric and hydrochloric acids are formed. Other molecules may decompose to form water and chlorine monoxide, while from still others, hydrochloric acid and oxygen may be formed. Exposure to sunlight favors the last reaction, while the first will predominate in the dark. The first and second occur in concentrated solution, the last one in dilute solution.

This detailed study of the composition of bleach liquor helps to explain its instability. Escape of chlorine monoxide and oxygen as gases promote forward reaction in the above equations and further decomposition. This explains why high temperatures destroy bleach. The uneconomic practice in some laundries of running live steam into the bleach bath to heat it up, will decompose some of the bleach before it has had a chance to perform its required function, by driving out gaseous components. Gases are less soluble in hot liquids than they are in cold, so that the second and third reactions are promoted by heat,—e.g. it is common practice to drive oxygen and carbon dioxide out of otherwise pure water by boiling it.

Some deterioration of bleach goes on even under the best of conditions. It has been reported that sodium hypochlorite solutions containing 10 per cent of available chlorine deteriorate to about half strength in 390-420 days.² This is a daily loss of about 1/600 of the available chlorine. Conditions favoring stability are storage in a closed container in a dark, cool place. Some laundryowners make bleach up fresh

at frequent intervals and so avoid storage. Some buy it in small quantities.

SODIUM hypochlorite solution, or Javelle Water as it has been known for years, may be made by causing lime bleach, calcium hypochlorite, to react with soda ash. Calcium carbonate settles out as an insoluble precipitate, while sodium hypochlorite remains in solution. The defect of this method of preparation is that some of the calcium sludge may possibly be drawn off with the sodium hypochlorite liquor. Such calcium would precipitate soap on the wash goods and make matters worse instead of better. The method is mainly a matter of historical interest. Another method which should be mentioned in passing is electrolytic preparation of chlorine by passing a direct current through a solution of common salt. The method is not much used, since the special cells required may get out of order if not handled properly, and also the concentration of bleach produced is very low, as it usually contains not more than 0.3 per cent of available chlorine.

The usual method of making chlorine bleach is to pass chlorine gas into strong caustic soda solution until the required amount is added. Liquid chlorine is purchased in the usual cylinders. The rate of escape of the gas from this cylinder is controlled by means of a reducing valve. The stream of gas is lead through corrosive-resistant tubing such as lead pipe, into the caustic liquor. This is usually contained in an earthenware crock, a cement tank or a container

made of some such sort of material. The solution has a tendency to heat up, which would promote decomposition and loss of chlorine gas, so that cooling during preparation is usually resorted to.

Bleach liquor is extremely reactive and attacks most metals such as iron, copper and zinc, being itself decomposed by these metals. For this reason these metals cannot be used in any apparatus with which the bleach will come in contact. Monel Metal is resistant to it, being much less subject to oxidation.

SODIUM hypochlorite is a very strong oxidizing agent. It owes its whitening effect to this oxidizing power. Some people erroneously believe chlorine to be the oxidizing or bleaching agent. That this is not so is proved by the fact that absolutely dry chlorine gas has no bleaching effect whatever. While the exact mechanism of hypochlorite bleaching is not known, this much can be said: The process takes place in aqueous solution and is ionic. Neither chlorine gas nor the chlorine molecule dissolved in water, is the reactive substance. Sodium hypochlorite ionizes in aqueous solution to give sodium ions and hypochlorite ions. Hypochlorite ion itself is the oxidizer, OCl^- .

The concentration of sodium hypochlorite is ordinarily determined by titration with a standard solution of sodium arsenite. The hypochlorite ion is reduced to chloride ion with the liberation of energy, and the arsenite ion is oxidized to arsenate ion. The amount of the standard solution used in the reaction gives a

² *Analyst* 59, 619-20 (1934).

measure of the amount of hypochlorite ion present in the unknown. The result is expressed as so much "available chlorine." Analysis of bleach liquor therefore shows how much of the chlorine is present in a form available for oxidizing purposes, since hypochlorite ion is used up in oxidizing organic stains in just the same way that it is used up in oxidizing standard arsenite solution. Sodium hypochlorite is a more active oxidizing agent than either ozone or hydrogen peroxide, since it gives up more energy during oxidation-reduction reaction than do either of these other two oxidizing agents.

The laundry or reseller who purchases prepared chlorine bleach should see to it that it contains at least 10 per cent of available chlorine. The cost of the ingredients is so small a part of the sale price that the actual difference in cost between a 7 per cent bleach and a 10 per cent bleach is negligible. Labor costs, packaging, transportation and selling costs are the same in either case. The only thing of value for bleaching is the content of available chlorine in the product. That is why buyers should insist on getting a high chlorine-content bleach, instead of paying more in proportion for the incidental costs of the product.

THE amount of bleach to be used depends on the time, temperature and concentration of bleach during the bleaching operation. Bleach is usually added to the last suds during regular laundry operations. For white cotton and linen wearing apparel and flat-work, it is recommended that the bleach be added to the fourth bath with soap and builder. Two quarts of a one per cent bleach per 100 pounds of material is advised. It is always safer to dilute the bleach with about ten times its volume of water and add it in this diluted form to the wheel. The one per cent bleach is added to 3-4 inches of water in the wheel, so that the final concentration of bleach would not be more than 0.01 per cent. This bath is desirably run for 10 minutes at a temperature of

155-160° F. It should be noted that for washing butchers' aprons or other badly soiled materials, good practice does *not* recommend any increase in the amount of bleach. Two more suds are added to the wash formula and the bleach kept to the same concentration. The point is that the major cleaning operation should be completed before bleach is added. Adding bleach to soiled garments only destroys and wastes the bleach, besides giving poor bleaching results. The suds should have reached the "white" stage before any bleach is used. However, the washing formula is usually shortened by adding the bleach to the last suds rather than as a separate treatment.

Some laundry operators work under the impression that bleach can be counted on to make any type of work white. One laundry was observed where more than twice the recommended amount of bleach was being used on heavily soiled work. The result was naturally very poor, with excessive tendering of the clothes. Such practices are the basis for the justifiable accusation that some laundries rot the clothes. One very good laundry uses the recommended amount of bleach in a 4-inch bath for 20 minutes at 130° F. The relatively low temperature is compensated by the longer period of bleaching.

The tendering action of bleach on fabric is not due to its alkalinity, as the alkali is diluted in practice below the danger point. Experiments to show the relationship between the degree of alkalinity and loss in tensile strength have been carried out. Samples of Utica sheeting were treated with 0.033 per cent solutions of various alkaline soap builders, and the same concentration of caustic soda solution for comparison. The pH of this concentration of caustic soda is 11.35, while that of a number of silicates of this concentration varies from 10.7 to 11.3, according to the ratio of Na_2O to SiO_2 . In spite of this difference in free alkalinity, the loss in tensile strength was practically the same with caustic as with the more alkaline

silicates, being a drop of 5-6 units with both free caustic and alkaline silicates, from the tensile strength with pure water. From the results it was concluded that a 0.033 per cent solution of caustic alkali would not cause a serious loss in tensile strength. If one starts with the maximum of 10 per cent of free alkali in the concentrated bleach, dilutes this to 1 per cent for addition to the wheel, further dilution in the wheel should be not less than 1 to 100, so that the maximum concentration of free alkali which would come in contact with the wash would be of the order of 0.01 per cent, about one-third of that used in the work referred to.

The weakening effect of bleach is due to its oxidizing action, in other words to the hypochlorite. What happens is that bleach left in contact with fabric too long, or used at too high a concentration, will oxidize the material of the fabric, cellulose, to oxycellulose. The presence of the latter weakens the fabric so that its tensile strength is diminished. Overbleaching results in oxidative attack on the fabric, and cannot possibly do any good but is sure to do harm. Overbleaching is usually preceded by poor washing procedure, such as mixing lightly and heavily soiled garments, running too hot a break so that protein stains are set, and using insufficient suds to remove the soil. Bleach is then counted on to overcome all of this, which it naturally fails to do.

Bleach should never be used on colored clothes, as it will attack most dyes, as most everyone knows. It should never be used on silk or wool, as it has a solvent action on them. When properly used on white cotton or linen goods, it will improve their appearance by restoring their whiteness and removing such stains as those caused by fruit, coffee, tea, perspiration, mildew, etc. These are all organic in nature and in some cases may actually be removed and in others merely oxidized to colorless substances. Iron stains are not removed by bleach, as they consist of ferric oxide, which is a colored



compound already in its highest state of oxidation and which is removed later by proper souring. Spotting caused by calcium soap from hard water, will not be affected by bleach, nor in general, will other stains caused by inorganic materials.

SOOMETIMES commercial bleaches contain added ingredients besides those normally present as described above. Borax is such an addition. Why this should be added is difficult to see, probably merely to have something there so that it can be described as different. Perhaps the intention was to use borax to bring down the alkalinity, but there is no need to reduce the alkalinity as it exists in the wheel, and before it gets there, the alkali serves an important purpose. Borax is the poorest of the alkaline salts that have been used as soap builders. A 0.033 per cent solution gives a pH of 9.35, which is on the acid side of sodium hypochlorite solution.

Two quarts of a one per cent chlorine bleach solution for each hundred pounds of materials washed, is recommended for correct bleaching.

Borax has no cleansing action of its own, it is exceedingly ineffective as a soap builder, and its buffering action in the presence of sodium hypochlorite would be such as to promote the decomposition of the latter by forming an excess of unstable hypochlorous acid. Perhaps one might ask why hypochlorous acid itself would not act as a bleach. It would if you could keep it stable, but there is no way to prevent it from decomposing.

Silicate builder is sometimes added to bleach, but usually as part of the wash formula, rather than as part of the bleach itself. There is

³ John D. Carter, *Ind. Eng. Chem.* 18, 248-52 (1926).

no reason why commercial bleach could not be made up containing it, if desired. The favorable effect of silicate on bleach has been known for a number of years.³ Carter studied the effect of hypochlorite on cheesecloth and found that weakening was directly proportional to concentration, time of bleaching and temperature. When sodium silicate was added to the solution, the weakening effect of the hypochlorite was reduced. The silicate also improved the whitening effect of the hypochlorite. Carter used sodium silicate with a ratio of $\text{Na}_2\text{O}:\text{SiO}_2$ of 1:2.60. This would give a pH above 10 and at the same time would be a colloidal rather than an alkaline silicate. Its buffering action would no doubt stabilize and improve the effectiveness of sodium hypochlorite and its colloidal action probably protects the fabric. Silicate does increase the ash content of the fabric, so that it may form a very

(Turn to Page 73)

HOUSEHOLD AMMONIA

By David D. Catts

Cole Chemical Corp.

THE old familiar clear ammonia for household use is simply a mixture of ammonia and water. Cloudy ammonia is the same clear ammonia solution to which has been added some material to impart a milky or silvery cloud of varying intensity. Milky ammonia is simply concentrated cloudy ammonia.

The predominant popularity of ammonia as a cleanser can largely be attributed to the fact that it is both a mild alkali and excellent solvent. It is strong enough, even while dilute, to cut many types of grease and remove stains from clothing, porcelainware, etc. Ammonia, however, is not a violently corrosive alkali, and will not attack the hands and clothing. Some of the common uses for household ammonia are:

1. Being a mild solvent, ammonia when added in small amounts to the bath will remove body perspiration and odor leaving the skin clean and odorless.
2. The addition of a small amount of household ammonia to warm water will effectively cleanse the hair, imparting a luster. For some years, hairdressers have used ammonia in preparations to clean and soften the hair during permanent waving.
3. Ammonia solutions when applied to insect bites aid in reducing the irritation.
4. Ammonia will remove most types of grease and oil from fabrics without attacking the fabrics themselves, and in only rare instances will the dye be attacked. Ammonia is the safest alkali for general use.
5. Ammonia will brighten vitreous materials such as china and glassware without danger of scratching. Many powdered cleansers are not to be recommended for cleaning delicately finished surfaces because of this scratching tendency.
6. Ammonia is excellent for cleaning windows and drinking glasses.
7. If the color is taken out of silk by fruit stains, ammonia will often aid in restoring the color.
8. To brighten carpets, wipe them with warm water to which has been added a few drops of ammonia.
9. Equal volumes of ammonia and turpentine will take paint spots out of clothing, even if hard and dry. Saturate the spot as often as necessary and wash out in soap suds. Painters employ ammonia as a paint and varnish remover.
10. A teaspoonful of ammonia in a quart of water will aid in washing brushes and combs.
11. A teaspoonful of ammonia in a cup of water will brighten gold or silver jewelry. A few drops of ammonia on the under side of diamonds will clean and brighten them immediately.
12. Ammonia is most effective in softening water employed for dish washing or laundry purposes.
13. Battery manufacturers recommend wiping battery terminals with a cloth moistened with ammonia to neutralize any acid which might otherwise cause corrosion.

The usual materials employed in preparing household ammonia,—both clear and cloudy,—are ammonia, water, various kinds of soap, and sometimes lime water.

Under present market conditions, the cheapest source of ammonia is the commercial grade of 26° Baume aqua ammonia. This chemical is produced by absorbing ammonia gas in distilled water until the desired concentration is reached,—in this case, until the gravity of the solution gives a hydrometer reading of 26 degrees Baume.

Aqua ammonia of 26 degree Baume strength is available in a number of package sizes. Iron drums containing about 50 gallons (375 pounds net) and large iron drums containing about 100 gallons (760 pounds net) are the popular containers. Tank cars containing 10,000 gallons (75,000 pounds net) are of interest to only the largest bottlers.

To make a saleable product, the bottler must package a pure ammonia. Any off color stock will show up when compared with other bottles on the dealer's shelves. The odor of ammonia must be the only one there, any tarry odors or the familiar nauseating odor of pyridine must be strictly avoided. The purchase of ammonia of synthetic rather than coal-tar origin will assure the bottler of the complete absence of all foreign odors and residues.

To be sure the drums of aqua ammonia he receives are of full strength, the bottler should be in a position to test them. It is also obviously desirable to be able to determine the strength of competitive bottled ammonia. The customary way to determine strength (ammonia content) is to find the gravity of a sample in degrees Baume.

When determining gravity or degrees Baume care must be taken not to expose the sample to the air for too long a time as it will lose strength. Ammonia becomes lighter



when warm. For this reason it is customary to base all hydrometer readings on 60 degrees Fahrenheit. For all practical purposes anywhere from 50 and 70 degrees Fahrenheit will give readings within one half of one degree Baume to the standard 60 degrees Fahrenheit.

The following outline should be carefully followed in making gravity determinations:

1. Withdraw a suitable sample into a bottle or cylinder and tightly close the receptacle with a glass or rubber stopper.
2. If the sample is too cold, place it in a warm spot until it reaches an approximate temperature of 60 degrees Fahrenheit.
3. If the sample is too warm, cool it under the water tap to an approximate temperature of 60 degrees Fahrenheit.
4. When sample has attained a temperature between 50 and 70 degrees Fahrenheit—in case of doubt use a thermometer—pour it quickly into a cylindrical con-

Baume hydrometer reading	Specific Gravity hydrometer reading	Percent by weight Ammonia in the sample
10	1.0000	0.00
11	0.9929	1.62
12	0.9859	3.30
13	0.9790	5.02
14	0.9722	6.74
15	0.9655	8.49
16	0.9589	10.28
17	0.9524	12.10
18	0.9459	13.96
19	0.9396	15.84
20	0.9333	17.76
21	0.9272	19.68
22	0.9211	21.60
23	0.9150	23.52
24	0.9091	25.48
25	0.9032	27.44
26	0.8974	29.40
27	0.8917	31.36

tainer tall enough to float the hydrometer freely.

5. Place the hydrometer in the liquid and observe the hydrometer readings opposite liquid level. When making the observation, be sure the eye is even with liquid level. The table on the left shows the relation between Baume hydrometer reading, specific gravity reading, and percent by weight of ammonia in the sample.

The addition of small amounts of soap to ammonia solutions imparts a silvery, iridescent cloud whose intensity increases on standing. The large bottler may find it economical to prepare his own soap from stearic and oleic acids.

It is poor economy to buy any but the best quality soap. The amount consumed is small and the possible damage done by an inferior soap can far offset any initial difference in cost. Some bottlers prefer to make their own soap by using stearic and oleic acids claiming that the

cost is slightly less than that of prepared soaps.

The use of lime water to impart a cloud seems, in the main, to be waning. Clouds produced with lime water frequently assume a curdled appearance on aging. If lime water is used, it may be bought as such from any chemical house, or it can also be made as follows: 1. Fill a gallon jug three-quarters full of water. 2. Slowly drop in half a teaspoonful of slaked lime. 3. Shake well and let stand. Only the clear liquid on the top may be used.

Water

USUALLY city water is satisfactory in making household ammonia. If a cloud develops when ammonia and city water are mixed, it is necessary to let this cloud settle out of each batch. Usually this requires over night. The sediment can be drawn off from the bottom or filtered out. Also the clear liquid above the sediment may be drawn off leaving the undesirable material at the bottom. Removal of the sediment is essential as it will impart a poor appearance to clear ammonia and may cause cloudy ammonia to curdle. The sediment is likely caused by small amounts of rust, dirt, or hardness in the water.

Mixing Equipment

AMMONIA has a chemical action on copper, zinc, tin, monel metal and a number of other metals. Iron or steel are not affected by ammonia in any concentration. Equipment for holding ammonia solutions can be constructed of iron, steel, stoneware, glass, or rubber. Galvanized tanks or piping are to be avoided.

Measuring vessels should be of iron or enamel ware. Carefully avoid galvanized or tinned containers. Mixing tanks should be of iron which has previously been scrubbed clean of rust. Stoneware may be used also. Piping should be of black iron or rubber. Valves must be of iron. For convenient bottle filling by hand, many bottlers

use a flexible rubber hose and a "pinch cock" which squeezes off the liquid flow. Special semi-automatic aluminum nozzles are also available. Pumps must be free of bronze or brass parts. Bottle filling machines should be free of copper alloys.

Bottles, Stoppers and Labels

THE small bottler of a low-priced product may find it hard to decide whether to use new or second-hand bottles. New bottles, if purchased in relatively large quantities, are not excessively

costly. In addition to uniformity, it is possible to save on the cost of cartons by using a second time the cartons in which the empty bottles arrive. For freight shipment of full bottles, it is necessary to place a protecting pad above and beneath the bottles. For truck movement, this may not always be necessary.

Stoppers should be long enough to provide a good hold in removing and tapered enough not to become frozen in. Do not drive stoppers in too tightly. To do so may cause the bottle to break if it

AMMONIA

FOR GENERAL USE ABOUT THE HOUSE

AMMONIA gives a snowy whiteness to plain goods, but does not injure fast colored fabrics. It saves all the soda, half the soap, labor and time, and for many purposes replaces soap entirely. It restores all the original brilliancy and lustre to old black silks, laces and woolen goods, no matter how much soiled they may be.

AMMONIA will produce a most luxuriant and healthy growth in plants and flowers, when used by putting a few drops twice a week in water put on them.

— ♦ ♦ — DIRECTIONS

For the Laundry, put one tablespoonful into a pail or three gallons of water; clothes soaped with half the usual quantity of soap, and soaked over night in this water will be perfectly cleansed and whitened with little or no rubbing.

For Glass, silver, crockery, painted walls, stains in marble, oil-cloth and plain wood work, use one or two tablespoonfuls to a pail of water, and little or no soap will be needed.

To clean Hair Brushes and Combs perfectly and quickly, use a teaspoonful in half a basin of water.

For the Toilet, use half a teaspoonful in a basin of water or one tablespoonful for a bath-tub.

Suggested label for household ammonia.

is placed over a hot stove and the stopper does not loosen when pressure is generated.

Care must be taken that full measure is in each bottle to comply with municipal bureaus of weights and measures. Generally a quart bottle contains a full quart when the liquid is level with the bottom of the shoulder although some bottles must be filled to the very neck. Overfilling may result in pushing the stopper out or breaking the bottle in the event of overheating.

The United States Department of Agriculture imposes strict regulations in wording for labels. This is because ammonia, if taken internally, will irritate or burn the mucous membranes. It is recommended that each bottler obtain the full text of these regulations from the nearest office of the Department of Agriculture. The publications are free.

The major requirements for labels can be summed up as follows:

1. The label shall plainly identify contents. That is, the word "Ammonia" must appear prominently.
2. The label shall state the quantity contained, a quart bottle should be labeled "contents 32 ounces net," etc.
3. The label shall identify the packer or distributor. Such wordings as "packed for" and "packed by" are satisfactory.
4. The Department of Agriculture has ruled that solutions containing more than 5% by weight of ammonia gas (13 degrees Baume hydrometer reading) must be marked "Poison" in uncondensed gothic letters of 24 point size. Also the following antidote must be printed on the label:
 "External—Flood with water, then wash with vinegar."
 "Internal—Give vinegar, or juice of lemon, grapefruit, or orange, copiously. Follow with olive oil."
 "Eyes—Wash out with 5% boric acid solution."
 "Call a physician."

Practical experience in ammonia handling indicates that the dangers of external exposure to dilute household ammonia are negli-

gible. The usual result is a slight chapping of the hands and this only following repeated and prolonged exposure to concentrate solutions. (It is an interesting fact that a number of beauty lotions contain ammonia.) Obviously, the chance of getting ammonia in the mouth or eyes is remote when ordinary care is exercised.

Compounding

THE base of all household ammonia is water and ammonia. The same proportions of water and ammonia may be used for

both clear and cloudy products. The only difference is that soap is added to give the cloudy effect.

To make up clear ammonia, merely mix the necessary volumes of water and ammonia and bottle. In the case cloudy ammonia, mix water and ammonia as usual and then add soap solution or other source of cloud.

The table herewith shows how much water to add to a gallon of 26 degrees Baume aqua ammonia to make a product of the desired strength.

<i>Strength of final product in degrees Baume</i>	<i>Gallons of water to add to each gallon of 26 degree Baume Aqua ammonia</i>	<i>The final product will contain this per cent in weight of ammonia gas</i>
11	15.4	1.62
12	7.1	3.30
13	4.4	5.02
14	3.0	6.74
15	2.2	8.49
16	1.7	10.28
17	1.3	12.10
18	1.0	13.96
19	0.8	15.84
20	0.6	17.76
21	0.4	19.68
22	0.3	21.60
23	0.2	23.52
24	0.1	25.48
25	0.006	27.44

In preparing clear ammonia solutions, it makes no difference which is put in first. Be sure to mix thoroughly or the product may not be of uniform composition. To prevent loss of strength, keep a lid over the mixing drum during bottling. A wood or corrugated paper cover will be satisfactory as long as it is kept dry. If ammonia collects on a wooden or paper lid and then runs down into the drum, discoloration will result. In such a case the use of a sheet iron cover will be necessary.

Cloudy Ammonia

THE same solution of ammonia and water is used for both clear and cloudy ammonia. There are several ways of imparting the cloud, as has been stated. The

most common is the addition of soap. Another is to add soap and lime water. In this case, the lime water is first added to the ammonia-water mixture and the soap added later. For those who prefer to make their own soap the following is suggested:

- a. Into a two gallon iron container pour three pints of water and then add two ounces of stearic acid and three quarters of an ounce of oleic acid.
- b. Bring to a boil and stir to dissolve all lumps.
- c. Remove source of heat.
- d. While solution is still hot, (above 160° Fahrenheit) pour in one gallon of 16 degree Baume Aqua Ammonia. Stir vigorously until the mixture becomes uniformly milky. There should then be no lumps or solid matter remaining.

e. If for any reason, there does remain any solid matter, filter it out with a cloth or absorbent cotton filter.

f. This stock solution is then added to solutions of ammonia and water until the desired cloud is made. The usual concentration will be the entire above batch to fifty gallons of ammonia solution.

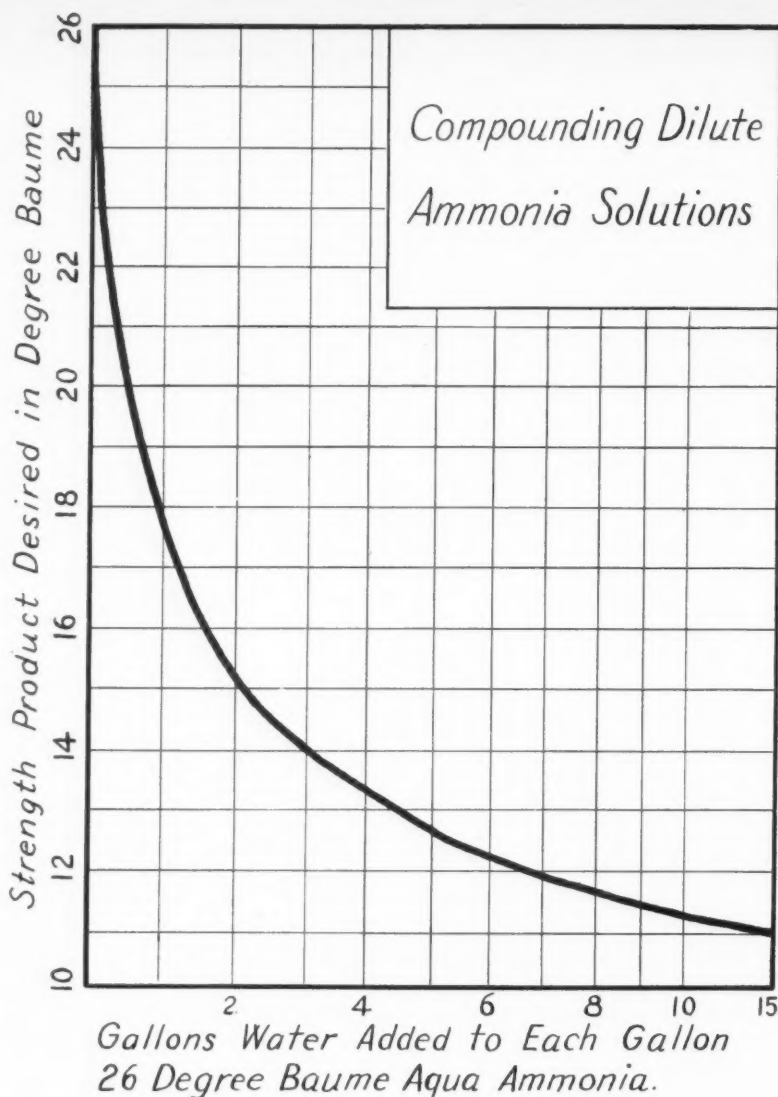
For a lime water cloud, use the following:

- a. Heat one and one half ounces of stearic acid to melting.
- b. Pour this into three ounces of oleic acid.
- c. Pour this mixture, while warm, into one and one half pints of hot water.
- d. Then slowly add one-half pint of 26 degree Baume aqua ammonia with vigorous stirring. A creamy white liquid will result.
- e. Dissolve three ounces of powdered castile soap in one quart of hot water and when completely dissolved add it slowly to the oleic acid and stearic acid mixture.
- f. Mix well and make up to one gallon by adding hot water, this is the stock solution.
- g. Mix ammonia and water to the desired concentration for the final product.
- h. To every gallon of this ammonia solution, add one half ounce of clear lime water. Stir well.
- i. To each 200 parts of ammonia and water, already containing lime water, (h) add slowly one part of the stock solution (f).
- j. Stir while adding. The cloud will form slowly.

Milky Ammonia

THE popular Milky Ammonia may be made as follows:

- a. Into a two gallon iron container, pour three pints of water and add two ounces of stearic acid.
- b. Bring to a boil and stir vigorously to break up any lumps.
- c. Remove source of heat.
- d. While solution is still hot (above 160° Fahrenheit) pour in while stirring, one gallon of 16° Baume Aqua Ammonia.



- e. Continue stirring until the mixture becomes uniformly milky.
- f. When cool dilute with more 16° Baume aqua ammonia or bottle without dilution. The product will remain permanently milky, with only slight sediment formation, for a period of years.

Sediment in Ammonia

IF a sediment is formed when ammonia and water are mixed, it is usually caused by the use of a very hard water or the presence of dirt or rust in the water. Alum is commonly used in the treatment of municipal water supplies, which might account for its presence

in ordinary tap water. Rust is generally picked up in pipe lines.

Clear Ammonia when bottled will usually develop a slight flaky sediment on standing any length of time. This is from the glass bottle. Ammonia being an alkali, slowly attacks the silicate of the glass, causing silica to settle to the bottom. This does no harm, but gives a bad appearance. In cloudy ammonia this sediment will, of course, not be so visible.

If cloudy ammonia containing lime water curdles, add less lime water or cut it out entirely. If city

(Turn to Page 141)

"JABON COCHI"

Indol Soap - Guatemalan

Native Soap of Guatemala—Its Raw Materials and Primitive Method of Manufacture Described

By W. A. Mott

WITH few exceptions, soap manufacture in Central America, and especially in Guatemala, is in an extremely primitive state. This is somewhat unusual when the comparative nearness of this country to the United States is considered. The processes used in making soap are so crude that they are of considerable interest in comparing with the modern methods used generally in North America and in some factories of the republics to the South. About half of the soap used in Guatemala, "jabon cochi," is made from raw tallow just as it comes from the "rastro" or slaughter house. Unrefined, and even unwashed, this crude material, composed of about 76 per cent fat and 24 per cent gristle, dirt, and blood added for good measure, goes to the soap kettle. The lye used to saponify this fatty mess is probably much the same type that Noah used to make soap on the Ark. It is made from hardwood ashes, which are causticized with slaked lime, and which gives a lye of about 15 deg. Baume and the color of dark port wine.

The raw tallow is put into a cast iron round bottom pot which holds about 4,000 pounds, or a little more. Water is added and a wood fire is built underneath the pot. As soon as the fat begins to melt, the lye is slowly added and boiled until the

mass is saponified. It is noteworthy for the North American soapmaker to appreciate that everything that goes into that pot, blood, dirt, gristle, comes out in the finished soap,—everything except such water as is slowly evaporated in the process.

After about six days of boiling over direct fire, slow boiling so as not to burn the soap, all pieces of meat, gristle, etc., have been dissolved and form a part of the soap mass. They change to gelatin plus some ammonia which goes off with the steam. As this soap mass when finished does not lather freely, about 25 to 30 per cent of a mixture of 10 per cent rosin and 90 per cent coconut oil is added. After this addition, the mixture is boiled for another three or four days until the native soapmaker, who knows nothing about chemistry whatever, and, not too much about soap making, is satisfied that it is finished. All adjustments are based on tasting with the tongue. A smart native soap maker is one who can get his batch finished in less than ten days from the time of charging the pot.

Strange as it may seem, the finished soap made in this way has some good points. It contains no free alkali, lathers well, and is very easy on the skin. In distilled water, it usually gives a clear solution, this being the test for complete saponification. However, the soap stinks to

high heaven of its fatty ancestry, the filthy raw tallow from which it is made.

The next morning, after the soap maker pronounces it finished, it is shoveled out of the pot and put on a large wooden table. Here, lumps of the soap of about ten kilos each are wrapped in clean salt sacks and pounded with a mallet or large wooden hammer to make it more homogeneous. It is then cut or pinched into pieces of from two to eight Spanish ounces (slightly heavier than avoirdupois ounce) by native women who use crude suspension balances for weighing, and the pieces thrown on the floor which is covered with salt bags. It is not uncommon for these native women to work in the soap factory with a baby slung over their backs in a shawl. Other women provided with clean cotton cloths sit in small booths on the floor and work the pieces of soap into balls. These are sold in the local stores at three cents for a two-ounce ball to ten cents for an eight-ounce ball.

The wash women of Guatemala much prefer to use the soap balls and will not use a cube or square cut bar if they can help it. This is one of the reasons why many of them still stick to this type of potash soap which is called "jabon cochi" which literally means "pig

(Turn to Page 73)



A new addition to the line of the Janitors Supply House, Inc. of Baltimore. Jano is a cream colored soap powder for sale through the retail trade. Attractively packaged and waxed wrapped.

A bright red and white paper can with metal bottom and metal sifter top is the container for Mallinckrodt's new sodium fluoride roach killer. Costs \$3.10 per dozen wholesale. Retail at 41c.



The Mary King line of the J. R. Watkins Company, Newark and Winona, Minn., has been completely repackaged. Lavender complexion soap and bath salts shown here in matching blue throughout.

New
Products

and Packages

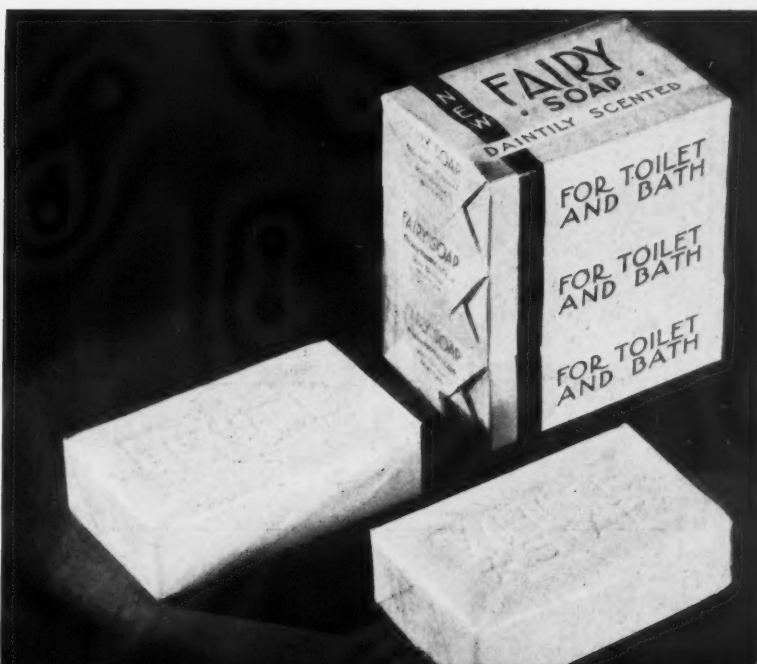


Three bars of Fairy Soap to a unit, now wrapped in Cellophane,—added to two new items of the Hecker Products line (nee Goldust), "Jewel" and "White Star" laundry soaps, each in individual Cellophane wrap,—something new for laundry soaps.



Windoshine, a glass cleaner, in a non-skid bottle with label in bright red and green is a new product of the A-M-R Chemical Company of Brooklyn. Topped with bright red cap by Armstrong.

A new shoe cleaner for children's shoes,—"Miss Beau Peep,"—the bottle is a replica of the famous nursery character, topped off with a black Bakelite cap. Closure moulded by Grigoleit Co.



TURNER CHEMICALS

The house of Turner has rounded out 75 years of service to chemical buyers. The wealth of experience gained over this long period of time insures your receiving a uniform product of the highest standard at the lowest possible cost. Concerning service—since moving into our new Distribution Center in Ridgefield, New Jersey, 3½ miles from the Hudson River in the heart of the industrial East, we are in a position to give our customers the best possible service.

LIQUID CAUSTIC SODA
Tank Trucks—Drums

We maintain local delivery tank truck service throughout the Metropolitan New York area.

CAUSTIC POTASH
CAUSTIC SODA

CARBONATE OF POTASH
CHLORATE OF SODA
PHOSPHORUS COMPOUNDS

Suppliers of Chemicals for 75 years

JOSEPH TURNER & COMPANY

RIDGEFIELD, N. J.

83 EXCHANGE PL.
PROVIDENCE

630 FIFTH AVE., NEW YORK

40TH ST. & CALUMET
CHICAGO

NEWS

New J. B. Williams Executives

J. B. Williams Co., Glastonbury, Conn., has elected Charles S. Campbell vice-president in charge of sales and a member of the Board of Directors. Mr. Campbell also heads the Durham-Duplex Razor Co., Jersey City, N. J. Everett Hurlburt, who with his brother controls the business, has been chosen president, succeeding Henry K. W. Welch, who retired recently after thirty-eight years of continuous service. Another new member elected to the Board of Directors is Samuel Meek, vice-president of the J. Walter Thompson Co., New York advertising agency. Thompson handles the Williams advertising account and Mr. Meek is account executive. The J. B. Williams Co. is one of the best known manufacturers of shaving soaps and accessories in the world.

DuBois Soap Building

DuBois Soap Co., 1120 W. Front St., Cincinnati, O., is building a three-story office addition to its plant. The first floor will be utilized for warehouse purposes, the second for general offices and the third for the sales and sales promotion departments. This addition is of reinforced concrete with glass-brick walls. Acoustical ceilings and air conditioning will feature the improvement. Until the building is rushed to completion by Shaefer Building Co., the offices of the DuBois Company are in the Union Central Building.

Move Watkins Chicago Branch

J. R. Watkins Co., Winona, Minn., and Newark, N. J., manufacturers of household products, have moved their Chicago branch distributing warehouse and offices to larger quarters at 2220 North Western Ave.

They were formerly located at 2600 North Western Ave., Chicago. Otto Pfeiffer is general manager of the Chicago branch.

Bialecke Joins Verley Staff

Albert Verley, Inc., Chicago, announces that Adam Bialecke, who has been chief perfumer for Armour



Adam Bialecke

& Co. for the past twenty-five years, is now associated with the House of Verley. Mr. Bialecke will serve in the capacity of traveling technician and will be available in that capacity anywhere that his many years of experience in perfuming cosmetics and soaps may be desired. Mr. Bialecke will make his headquarters as a member of the Verley technical and research staff in Chicago, where he will be centrally located for service in any section of the country.

George F. Young Dies

George F. Young, president of Charles W. Young & Co., soap manufacturer, Philadelphia, died in Atlantic City recently at the age of 52 years. His wife, a daughter, Mrs. Henry J. Smith, Philadelphia, and a son, Charles W. Young, Radnor, Pa., survive him.

Tonn Named Dif Manager

Dif Corp., Garwood, N. J., has appointed J. Fred Tonn to the position of vice-president and general manager of the concern. He formerly occupied the same positions with Oakite Products, New York.

Fels Gets L.L.D. Degree

S. S. Fels of Fels Naptha Co., Philadelphia, received the degree of L.L.D. from the University of Pennsylvania at its annual commencement exercises on June 9.

Jergens Ltd. to Build

Andrew Jergens Co., Ltd., Perth, Ontario, Canada, is planning construction of a one-story 65x160 ft. soap factory. When fully equipped the estimated cost of the new plant is set at \$55,000.

C-P-P Advances Hilbrant

Robert E. Hilbrant, supervisor of toilet article sales in the Chicago district for Colgate-Palmolive-Peet Co. for the past four years, has just been named district sales manager of the Kansas City toilet article district. L. H. Cates succeeds Mr. Hilbrant in Chicago.

Soap Makers Meet in Chicago

A general soap industry meeting, under the sponsorship of the Association of American Soap & Glycerine Producers, was held at the Hotel Blackstone, Chicago, June 29. S. Bayard Colgate, Colgate-Palmolive-Peet Co., president of the association, presided. A number of topics of general interest to the whole industry were discussed, including wage and hour legislation, tax problems, soap consumption and the oil and fat situation.



"Hand us the Soap"

To make a good cake of toilet soap is your job . . . To give it the best possible kind of wrapping that will win sales, is ours.

So we say "Hand us the soap" and let us see what we can do to make your package outstanding.

Our machines use practically any kind of modern wrapping material—and can make a package using a single wrapper or a combination of wrappers.

Among new developments are materials in roll form, the machine accurately registering the printed design by Electric Eye.

Send us a sample of your package and tell us briefly your present method of wrapping. We will give you our recommendations without any obligation on your part.

PACKAGE MACHINERY COMPANY, Springfield, Massachusetts
NEW YORK CHICAGO CLEVELAND LOS ANGELES

Mexico, D. F., Apartado 2303 - Peterborough, England: Baker Perkins, Ltd.
Melbourne, Australia: Baker Perkins Pty., Ltd.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Pynol Co. in New Hands

Pynol Co., Burlington, Iowa, sanitary products firm, has been purchased by Donald C. McConnell from the former owners, Messrs. Ray and Hines. The office has been moved to Quincy, Illinois, which will be the future headquarters of the concern.

Report Further Union Activity

Further unionization moves and additional labor troubles are reported by the soap industry this month, with at least one more concern having signed a closed shop contract, and votes either having been held or being in prospect at other plants. The concern that has recently signed a closed shop contract with a C.I.O. union is Manhattan Soap Co., whose plant is located in Bristol, Pa. The contract calls for a closed shop,—but with no check-off. Maximum hours are set at 40 per week, with a minimum rate of pay of 50c per hour for common labor. Girls are to be paid 40 to 42c per hour according to skill. Time-and-a-half is provided for overtime, with double time for Sundays and holidays. The Manhattan plant at Bristol was closed from June 1 to June 10 when the workers struck, but was opened again June 14 after signature of the union contract.

In the metropolitan district it was reported by the National Labor Relations Board that Local 20646 of the American Federation of Labor, designated as the Cosmetic, Soap and Perfumery Workers Union, had requested a vote at the Brooklyn plant of Kirkman & Sons so that the Kirkman employees might designate an official agency for collective bargaining. The date requested for the vote was July 10. At press time the board advised that no definite date had as yet been set for the vote.

A vote of this type has already been held at the Burlington, Iowa, plant of Iowa Soap Co. The employees voted for the United Soap & Glycerine Workers Union, a C.I.O. organization which was recently designated as the official bargaining agency for employees at the Kansas City plant of Colgate-Palmolive-Peet

Co. No definite contract has been signed, however.

Union activity has also been reported at the Cincinnati plant of M. Werk Co., but no details are available.

Foragers Outing June 26

The annual outing of the Foragers, New York soap and cosmetic sales group, was held June 26. As usual the affair consisted of a steamer trip to Monmouth Beach, N. J., where a shore dinner and a program of sports took up the entire day. A. J. Connolly acted as chairman of the entertainment committee. Prizes won in the various athletic contests will be distributed at an early luncheon meeting of the group at the Herald Square Hotel, New York.

Carman Handling P. & G. Soap

Carman & Co., Boonton, N. J., are now handling the Procter & Gamble soap line in all their branches. For the past four years, Carman & Co. have been manufacturing their own soap at Boonton, N. J. Recently the factory was closed, the assets purchased by Procter & Gamble, and Carman have again affiliated themselves with Procter & Gamble in the selling of bulk soap. This renews an old alliance of many years. As a matter of fact, the Omaha, Neb., Denver, Colo., and Kansas City, Mo., branches of Carman & Co. have sold Procter & Gamble soap even during the time that Carman were manufacturing their own products.

P. & G. Renews Radio Time

Procter & Gamble Co., the largest user of radio time in the United States, has just renewed its contract with National Broadcasting Co., covering 73 broadcasts a week over the coming year.

Alexander in Europe

D. C. Alexander, vice-president of J. R. Watkins Co., Winona, Minn., and Newark, N. J., is spending the summer in Europe. He sailed from New York on the *Normandie* on June 2.

Attack Vitamin D Soap Claims

Charging unfair competition in the sale of "Cosray Vitamin D Soap," the U. S. Federal Trade Commission has issued a complaint against Los Angeles Soap Co., trading as Cosray Products Co., Los Angeles. In advertising its soap the claim was made that its vitamin content enables users to smooth out premature wrinkles, reduce large pores, eliminate blackheads and pimples, correct subnormal skin conditions and restore youthful color and elasticity. The complaint charges that these claims are false and misleading, in that it is impossible for the skin to absorb an appreciable amount of vitamin in washing with soap or taking a lather bath. Vitamin D, according to the complaint, has no effect on the skin, and the use of the respondent's soap, therefore, will not cure skin diseases and will not accomplish the other results claimed.

Little on European Trip

E. H. Little, vice-president in charge of sales and advertising of Colgate-Palmolive-Peet Co., Jersey City, sailed on the S.S. *Bremen*, June 10, for a six-weeks' business trip in Europe. He was accompanied by his brother-in-law, Stanley Trezevant, of Memphis, Tenn. While in Europe, Mr. Little will visit plants and offices of firms affiliated with Colgate-Palmolive-Peet Co. in England, France, Germany, Poland, Belgium, Holland, Sweden, Denmark, Italy and Switzerland, and will make a study of European economic conditions. He and Mr. Trezevant plan to return to New York on the S.S. *Queen Mary*.

R. C. Watson in Europe

Rupert C. Watson, vice-president and treasurer of Firmenich & Co., New York, sailed for Europe on the S.S. *Champlain* June 12, accompanied by Mrs. Watson. They plan to return to New York late in July after visiting the home office of Firmenich & Co. in Geneva, Switzerland, with stops also in Paris and London.

Perfume Specialties
for the
SOAP INDUSTRY

A TRULY worthwhile toilet soap, shampoo or spray deserves something above the ordinary in a perfume. For years Roure-Bertrand Fils and Justin Dupont have been developing specialties, both natural and synthetic, that have lifted innumerable finished products out of the ordinary. This creative ability is working for you in 1937 as in the years before.

Our own extensive perfume laboratory works closely with the Roure-Bertrand and Dupont laboratories abroad. Experience gained through the years with Europe's perfume industry, coupled with a definite knowledge of American requirements, combine to produce the ultimate in perfume odors for any purpose. A wide range of modern perfumes is available, priced to suit almost any requirement. For example:

Carnation	105	Lavandone	105
Dahlia	105	Orchid	105
Gardenia	105	Rosenone	105
Jasmin	105	Tuberose	105

GEORGE SILVER IMPORT CO.

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Agents for:

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722 West Austin Avenue

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819 Santee Street

Consumer Preferences in Soap

George A. Eastwood, vice-president of Armour & Co., Chicago, is the author of an article entitled "Striking Back at Progress" which appeared in the June, 1937, issue of the *Executives Service Bulletin*, published by the Metropolitan Life Insurance Co. In detailing the methods followed by Armour & Co., in keeping step with industrial changes and meeting variations in the buying habits of consumers, he makes some interesting comments on the soap industry. We quote from his article briefly: "The soap business is affected by changing consumer preference as well as by industrial developments. The market for old-fashioned, hard-milled toilet soap, for instance, has been influenced by the idea that certain ingredients are beneficial to the skin. We still make the same kind of toilet soap, but our volume would be lower if our chemists had not found a way to offer Milady her choice of oatmeal soap, buttermilk soap, cold cream soap, lanolin soap, and palm oil soap. They are all good, and they contain the ingredient named on the label.

"When we consider soaps used for laundering, however, we are not dealing with fads and fashions. We run up against a most important domestic appliance—the electric washing machine. The use of standard laundry soap began years ago to decline in favor of soap flakes and soap chips, but the problem is still with us. Our laboratory has given us a soap flake for washing overalls and another which will cleanse fine silks without injury, but every soap chemist is looking for a product which will do each of these jobs better.

"Not many years ago automobile soap was a considerable item. We still sell some of it, but tougher finishes on motor cars have largely killed that market. However, compensating new markets have been developed. Fruit growers use soap in spraying solutions; new fabrics require new soaps in the textile mills; dry cleaners have been provided with soaps which are soluble in naphtha

and benzine; and in some manufacturing processes soap has replaced oil or grease as a lubricant.

"Our soap business in the beginning was primarily an outlet for inedible tallow. In addition, we now use oils from all over the world—palm, cocoanut, cottonseed, babassu, olive, and soy bean, as well as many others. Increased knowledge of chemistry brought about that change."

Philippines to Get Tax

Following the decision of the U.S. Supreme Court in the Haskins Bros. and Cincinnati Soap Co. cocoanut oil tax appeal cases, the State Department is preparing to transfer to the Philippines \$50,000,000 in taxes collected up to July 1 on the processing of Philippine coconut oil. Manuel L. Quezon, president of the Philippine Commonwealth has stated that money will be used to acquire large landed estates to be resold to tenants and others in small parcels not to exceed 250 acres each; to finance tenant-owners in the purchase of working animals, farm equipment, etc.; for road building, school construction and hospitals. The Commonwealth President estimated about \$20,000,000 will suffice to take care of this program, leaving \$30,000,000 to be spent for the readjustment of Philippine economy as the Joint Committee of American and Philippine Experts may recommend.

Good Advanced by Woburn

J. E. Good is the new sales manager of Woburn Degreasing Co., Harrison, N. J., manufacturers of fatty acids, succeeding Dr. Eric Schuelke, who resigned early last month. Dr. Schuelke will now devote his entire time to his own business, which he has conducted since 1928 under the firm name, "Colloid Chemical Laboratories," with offices at 92 Liberty street, New York. The firm manufactures specialties for the soap, cosmetic and other industries. Mr. Good was at one time Woburn's purchasing agent.

Argue Coconut Oil Tax

Arguments both for and against retaining the present excise tax on Philippine coconut oil were made in briefs filed last month with the Joint Preparatory Committee on Philippine Affairs. The brief against the tax was prepared by John B. Gordon, secretary of the Bureau of Raw Materials for American Vegetable Oils and Fats Industries. He contended that the tax should be reduced in order to benefit both crushers and consumers in United States and in order to retain a market for an important Philippine product for the purpose of permitting the islands to purchase other American goods.

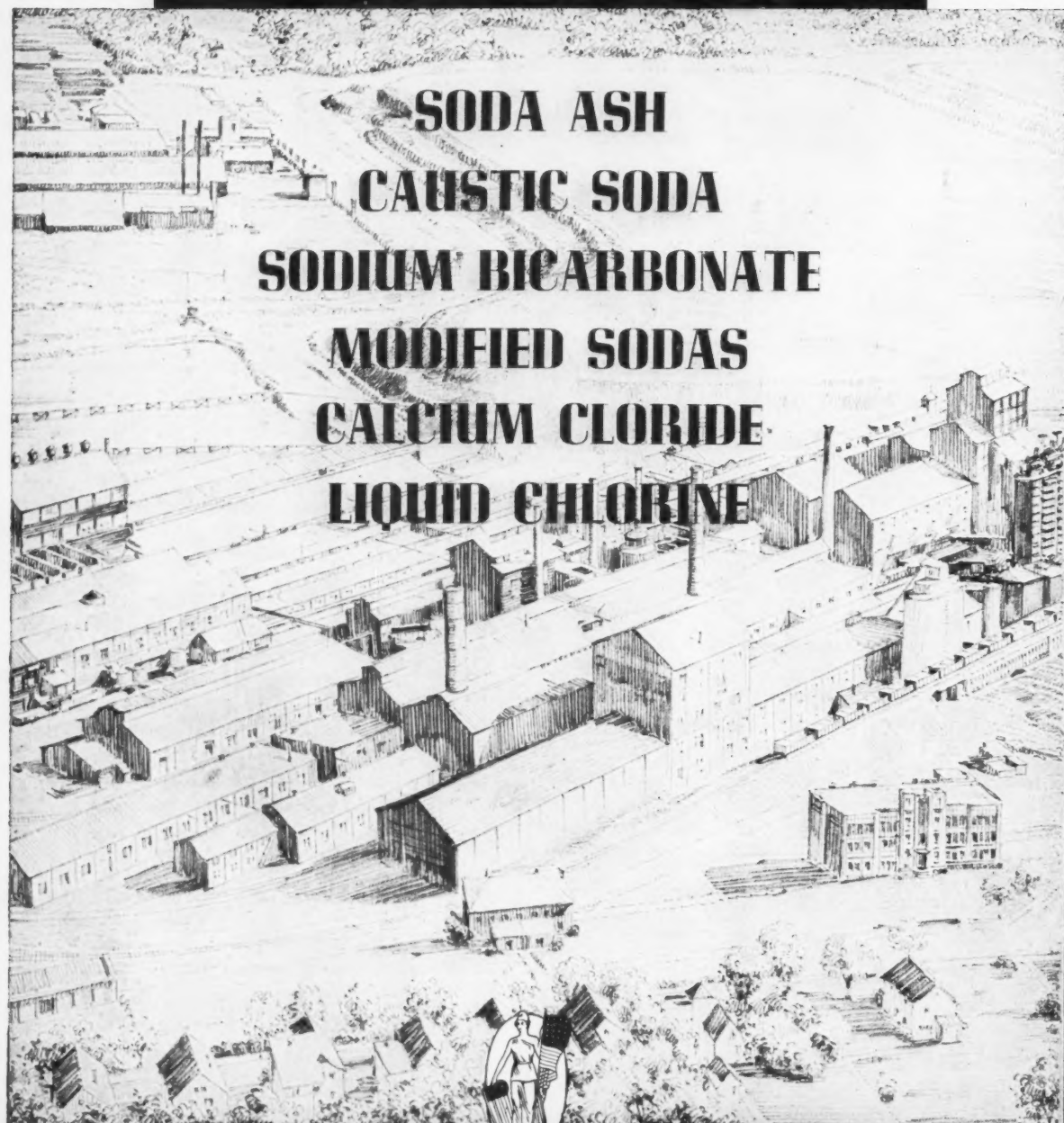
Sign Whaling Agreement

The International Conference of the Whaling Industry, held recently in London, and attended by representatives of the United States, United Kingdom, South Africa, Germany, New Zealand, Australia, Argentina, Irish Free State and Norway, closed with the signing of an agreement to control operations in this industry. The agreement, which is subject to ratification, comes into force on July 1. It provides that there shall be a closed season of nine months for pelagic whaling—whaling from ships attached to floating factories—in the Antarctic, and that in certain wide areas that type of whaling shall be prohibited.

Various Right Whales and the Gray Whale, all whale calves and females attended by calves are to be protected. It will also be forbidden to kill whales below certain new size limits. For the first time the sperm whale is to be protected in this way. Whaling at land stations is to be subject to a six months' close season.

The conference recommends that governments concerned should take powers to regulate the methods of shooting whales to prevent the loss of whales fatally wounded through the use of defective guns or harpoons. A warning is given that unless whaling is now strictly regulated, the stock of whales will be reduced to a level at which the in-

COLUMBIA



SODA ASH
CAUSTIC SODA
SODIUM BICARBONATE
MODIFIED SODAS
CALCIUM CHLORIDE
LIQUID CHLORINE



THE COLUMBIA ALKALI CORPORATION

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dustry will cease to be remunerative. The conference points out that the measures agreed upon may prove useless if the ships of countries not parties to the agreement are permitted to carry out unregulated whaling. Japan did not participate in the conference.

Chicago Associations Golf

The June tournament of the golf auxiliary of the Chicago Drug and Chemical and Chicago Perfumery, Soap & Extract Associations at Itasca Country Club drew a crowd of over 60 members and guests. Prize winners were as follows: Class A—J. Bodevin, E. F. Smith and J. T. James (tied for first), H. Cochran and E. H. Ericson (tied for third); Class B—H. V. Wallace, M. W. Fold and A. C. Stepan (tied for first), H. B. Elwell and F. Z. Woods (tied for fourth); Class C—C. P. Van Schaack, Jr., first; George Epstein and C. A. Hammond (tied for second); J. Gauer, fourth; Class D—A. F. Frantz and F. Topper (tied for first), G. F. Pauley, third, and E. L. Drach, fourth. Guest prizes were won by J. L. Ocen, R. R. Stern and A. G. Schneider. The next tournament will be held on July 13 at the No. 3 course, Olympia Fields Country Club.

Soap Employment Drops

The employment index in the American soap industry, as reported by the U. S. Dept. of Labor, dropped from 111.0 in March, 1937, to 107.2 in April. This compares with 95.1 for April, 1936, and a 1923-1925 average of 100. The payroll index registered 114.2 in April, 1937, as compared with 123.2 in March and 91.8 in April, 1936.

Midwestern Soap Expanding

Midwestern Soap Co., 1414 Blake St., Denver, advises that a complete laundry soap department will be added within the coming year. This new concern, which has been operating for the past ten months, is headed by N. S. Hillman, who for

a number of years was associated with the Dixie Disinfectant Co., Dallas, Texas. Jack T. Silver, formerly of West Disinfecting Co., is secretary-treasurer. At present, the main line handled consists of sanitary supplies. A branch office to handle sales in the Pacific northwest was opened June 14.

New Saponification Process

A new process has just been announced by Dr. Julius Schall, German soap consultant, called the "Descha" fatty acid saponification process. It is claimed that the new process enables the user to recover the glycerin in full, while using less fatty acid than any regular boiled soap method.

Dictionary Offered as Premium

Beaver-Remmers-Graham Co., Cincinnati, is making a special premium offer in the Oklahoma City district. A Webster dictionary is given free to purchasers of two cakes of "Grandpa's Wonder Pine Tar Soap". To obtain the dictionary each buyer must present a clipping from a newspaper advertisement.

Oleostock Dutiable as Tallow

Oleo stock, edible or inedible, having a titer test of 40° C. or over, is classifiable as tallow under paragraph 701 of the tariff act of 1930 and section 601 (c) (8) of the revenue act of 1932, as amended by section 701 of the revenue act of 1936, in instructions sent by the Bureau of Customs to the collector at San Francisco. Oleo oil and oleo stearin derived from such oleo stock or from any other product specified in section 601 (c) (8), as amended, are subject to the appropriate import tax under such section.

H. G. Mackelcan Returns

H. G. Mackelcan of Innis, Speiden & Co., New York, returned from Europe on the *Bremen* late last month. He made an extensive tour of Czechoslovakia, France, Germany, and England.

Lemmon Hecker President

Mr. Guy Lemmon, formerly of Benton & Bowles, advertising firm, became president of Hecker Products Corp., New York, June 30. Mr. Lemmon succeeds Randolph Catlin, who is now serving as chairman of the executive committee of the firm.

Restrain Valley Soap Co.

Valley Soap & Chemical Co., Turtle Creek, Pa., has signed a U. S. Federal Trade Commission stipulation, agreeing to stop representing that its "Valox Bleacher" cleans and disinfects in the same operation, or that it is effective as a treatment for aching feet and is a germ killer.

Clifton Offers Shampine Jelly

Clifton Chemical Co., New York, is currently featuring a new type product for the beauty parlor trade under the name "Shampine Jelly". Attractive display counter cards are being used to aid in introduction of the product.

Field Profits Higher

J. C. & J. Field, Ltd., British soap concern, reports net profits of £37,700 for 1936, exceeding by £6,600 the figure for the previous year. A 15 per cent dividend has been declared on the full capital of £125,000. J. C. & J. Field have been operating in the British soap market for over three hundred years.

To Advertise Tussy Cosmetics

Lehn & Fink Products Corp., New York, is planning an experimental newspaper and radio campaign on its Tussy cosmetic line, to begin in September. If the campaign proves successful in its initial stage, the plan is to promote and sell it nationally. William Esty & Co., New York advertising agency, are handling the account.

Zemmer Heads Ad Club

Paul Zemmer, advertising manager of Armand Co., Des Moines, has recently been elected president of the Des Moines Advertising Club.



EYE RAISING QUALITY

BETTER SUDSING is what users of soap expect today. Give it to them in your brands easily and profitably with P. Q. Silicate of Soda.

P. Q. Silicate improves the washing power of soap, and yields more pounds of saleable product (bars or flakes) for each dollar's worth of material added to the crutcher.

In our more than 75 years' work with silicates and soap, we have tried and proved methods of using more silicate in many types, including flake soaps. If you would like to know how much silicate can be added to your soap, we shall be glad to give you the benefit of our experience.

P. Q. SILICATES OF SODA

PHILADELPHIA QUARTZ CO.

PHILADELPHIA

General Offices and Laboratory: 125 S. Third St., Phila., Pa.
Chicago Sales Office: Engineering Bldg. Stocks in 60 cities.
Sold in Canada by National Silicates Ltd., Toronto, Ont.

Works: Anderson, Ind., Baltimore, Md., Chester, Pa.,
Buffalo, N. Y., Kansas City, Kans., Rahway, N. J.,
St. Louis, Mo., Utica, Ill.

ESTABLISHED 1831

Please send Bulletin No. 1, P. Q. Silicates of Soda in Soapmaking.

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N. Y. Oil Traders Golf

The first 1937 golf outing of the Oil Trades Association of New York was held at Pelham Country Club, Pelham, N. Y., June 15. There were over 225 on hand, the largest attendance in the history of the association. In view of the large attendance, member golfers were divided into four flights. In class A 1st low gross went to W. R. Cook of Hudson Oil Co., with G. A. Wharry, G. A. Wharry Co., taking 2nd. S. S. Seltzer, Royal Petroleum Co., won 1st low net. Frank W. Boyd, Service Station Equipment Co., 2nd low net, and Ernest Schultess, N. Y. Rubber Co., 3rd.

In class B low gross was won by E. H. Frey of Frey & Horgan Corp., with J. F. Renick of Renick & Mahoney Co., 2nd. M. J. McCarthy, A. Gross & Co., won first low net. Jack Britton, Standard Oil Co. of N. J., 2nd, and H. D. Armitage, Emery Industries, 3rd.

First low gross in class C was taken by E. C. Bigelow, Sun Oil Co., and 2nd by Julius F. Roten, L. Sonneborn & Co., C. T. Weihman of Smith-Weihman Co. won 1st low net. Walter A. Hoffman, American Oil & Supply Co., and H. C. Allington, American Machine & Metals Co., took 2nd and 3rd respectively.

In class D, low gross was won by Wm. D. Quattrocchi, Warner-Quinlan Co. Low net was taken by S. Margolis of First National Oil Co., and 2nd low net by W. F. Brede-meyer of Continental Can Co.

Truth About Cosmetics

This new book by Everett G. McDonough comes from the press at a particularly well-chosen time, answering as it does not only the critics of the cosmetic industry who find something dangerous or worthless in ninety-eight per cent of cosmetic products, but also that group of consumer advisers who try to tell cosmetic buyers how to make their own at home, at half the price. "Truth About Cosmetics" covers the whole cosmetic field and includes some material as well on soaps,

shaving preparations, oral preparations, etc. Formulas are not given, except in general terms, and the book does not deal at all with manufacturing considerations. It attempts, rather, to tell the need for certain cosmetics, the purposes they must serve, the different types available for each purpose, their chemical characteristics, and the advantages and disadvantages of each. Products discussed include creams, lotions, makeup preparations, face powders, permanent waving materials, perspiration preventives, perfumes, obesity treatments, hair and hair removal preparations, nail, hand and arm specialties, etc. Other chapters take up such allied topics as the skin, allergies, cosmetic dermatitis, scalp disorders, etc. Published by Drug & Cosmetic Industry, New York. 320 pages. 6½ x 9½. \$5.00.

Test Market for "Flexo"

Swift & Co., Chicago, are running a 13-week test campaign in Grand Rapids to determine the market possibilities for "Flexo," a new general household cleanser. The first step in the campaign was distribution of 50,000 samples of the new product.

Johnson Represents Aromatic

Esler Johnson is the new Pacific Coast representative for Aromatic Products, Inc., New York, with offices located at 461 Market Street, San Francisco. From this location he will cover California, Oregon, and Washington.

U. S. Soap Imports Drop

Imports of soap into the United States during 1936 declined sharply, amounting to only 3,920,000 pounds valued at \$540,000. This compares with 22,442,000 pounds valued at \$1,162,000, in 1935. Totals for the two years are shown in the following table:

Soap	1935		1936	
	Pounds	Value	Pounds	Value
Castile	2,038,000	\$232,000	1,681,000	\$183,000
Toilet	555,000	163,000	606,000	178,000
Other	19,849,000	767,000	1,633,000	179,000
Total	22,442,000	\$1,162,000	3,920,000	\$540,000

New Laco Plant

Laco Products, Inc., formed last year as a subsidiary of Pompeian Olive Oil Corp., Baltimore, to take over the business of Lockwood Brackett Co., Boston, has recently put into operation a new and completely re-equipped plant at Waltham, Mass. T. R. Lockwood, one of the founders of Lockwood Brackett Co., is vice-president of Laco Products, Inc., in charge of production. Karl Heilbronner has recently been added to the production staff.

Siam Soap Imports Decline

Imports of soaps, other than toilet, into Siam during the year ended March 31, 1936, totaled only 70,033 kilos, as compared with 1,294,927 kilos in the previous year. This decline is accounted for by increased domestic manufacture. Over the course of the past five years three new Siamese concerns have engaged in the manufacture of soap.

Publisher Takes Veil

Frazer V. Sinclair, co-publisher of *Drug & Cosmetic Industry* and *Toilet Requisites*, was married June 9 to Mrs. Mabel DeHaven of New York City. Mr. and Mrs. Sinclair sailed that night for Europe aboard the *Queen Mary*. They expect to return about the middle of July.

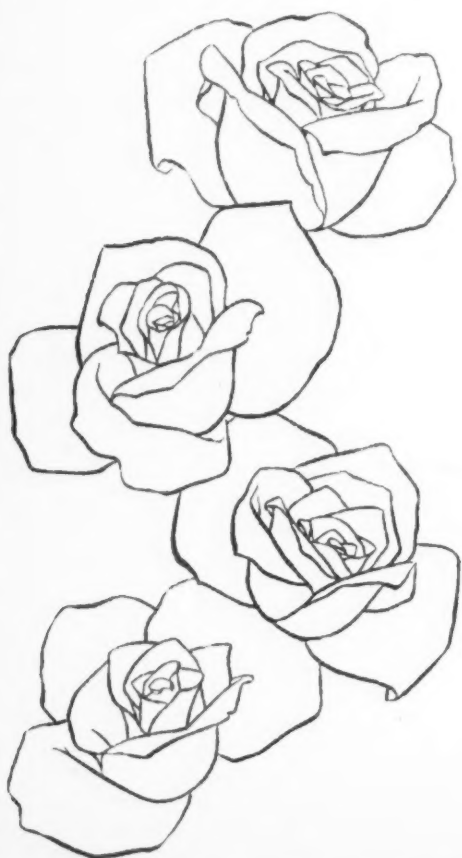
U. S. Soap Sampling Methods

The U. S. Federal Specifications Board has just approved methods for sampling and testing of soap and soap products. Copies of the standard methods may be obtained at 5c each by addressing the Superintendent of Documents, Washington, D. C. The standard catalog listing is No. PS-536.

POSITIVE FIXATION

with

Rose Crystals



IF you're not familiar with ROSE CRYSTALS already, a trial will convince you that this delightful aromatic is actually one of the finest and most adaptable fixatives yet developed for soap. And NOW is the time to get acquainted! Relative prices are so favorable for ROSE CRYSTALS that it may be used in practically every type of soap—even in the least expensive—with notable advantage both to the manufacturer and to his product. Its delicate rose fragrance—an odor used universally in perfume blending—combines perfectly with other perfumes and with mixtures or blends of essential oils and aromatic chemicals. Thus, it enriches the fragrance while preventing loss of even the lightest and most volatile constituents.

Since ROSE CRYSTALS will not discolor under **any** conditions, it is an ideal fixative for white soaps. It is recommended also for use in powders, perfumes, creams, cosmetics, bath salts and alcoholic extracts . . . or wherever **positive** fixation of aromatics is desired. Send for a trial sample and let this product of proven worth **prove its worth in your product!**



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● AROMATIC CHEMICALS

Large selection and superlative quality characterize the materials in this group. Use them for finer aromatic effects and for greater economy.

● FIXATIVES

See our advertisement, opposite page. In addition to Rose Crystals we carry a complete line of fixatives. This includes a new group of Artificial Animal Scents—Musk, Civet, Castoreum and Ambergris—especially adaptable to soap making. Send for literature.

● ANTI-OXIDANTS

These newly developed preservatives for soaps, animal and vegetable fats and oils are highly important to the soap manufacturer. Write us for full details.

● BATH SALT PERFUMES

Combining perfume and color, our delightful Bath Perstels greatly simplify and facilitate the process of manufacture. Very economical. Complete information and list of blends will be sent upon request.

● INSECTICIDES AND DISINFECTANTS

All materials offered by us under this heading are the results of years of research applied to this increasingly important phase of perfuming. Selection from the FRITZSCHE catalog assures uniform and unvarying quality of odor.

● DEODORIZING COMPOUNDS

Technical products such as para blocks, naphthalene, cleansers, waxes, polishes, solvents, diluents, etc., require good, dependable deodorizing compounds in their formulae. For effective, low cost coverage we offer and recommend Neutroleum, Safrella, Javollal, Methalate "C", and others. Send for particulars.

● TOILET SOAP COMPOUNDS

Perfumes in this group have been specially prepared to meet the exacting demands of soap manufacture. Exquisite scents at a minimum cost. Consult our catalog.

● LIQUID SOAP AND SHAMPOO PERFUMES

These perfumes are highly soluble and mix readily with liquid soaps. Simple to use; cost limits and strength of odor desired determine quantity required.

● DENTAL AND ORAL FLAVORS

These flavors are of a special character, skillfully blended to impart pleasant, clean, refreshing taste effects. We are prepared also to create special flavor blends according to your specifications and for your exclusive use. Consult us freely.

● SOAP COLORS

We supply soap colors to produce any desired tint. Send us description or sample of color to be matched for our specific recommendations.

SEND FOR TESTING SAMPLES

F.T.C. Cites Kolynos Co.

The U. S. Federal Trade Commission has ordered Kolynos Co., New Haven, Conn., to cease making misleading claims in connection with sale of "Kolynos" tooth paste. Among representations prohibited in advertising are that "Kolynos" tooth paste conquers bacterial mouth allegedly caused by germs which attack tooth and gum; cleans and polishes teeth down to the naked white enamel and erases and removes tartar; gives teeth a double cleansing not to be obtained with other dentifrices, and restores all teeth to sparkling or natural whiteness. The company also is ordered to cease representing that "Kolynos" tooth paste is new or totally different from other dentifrices.

Wants Toilet Soap Agency

A concern in Manila, P. I., is interested in securing an agency for sale of American toilet soap. Full particulars can be obtained by addressing the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., mentioning inquiry No. 3462. A concern in Cairo, Egypt, is interested in an agency for sale of American shaving soap in cup and stick form. Full particulars may be obtained by addressing the bureau, mentioning inquiry No. 3425.

Gift Soaps

(From Page 23)

the moment a particularly good one.

To the observer it would seem that a certain section of the soap trade has sat by, watching the cosmetic firms corner the gift market. Today perfume is one of the standard gift items, not because it is more eminently suitable for gift purposes than soap, but rather because the habit of giving perfume has become established by intelligent merchandising over a long period. With equally intelligent merchandising on the part of luxury soap packages, it would seem that the same thing could be accomplished in the soap field.

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on the manufacture of Drugs, Pharmaceuticals, Cosmetics,
Toilet Preparations, Photographic Materials, Soaps, Fine
Chemicals, Essential Oils, Perfumes, Dental Preparations,
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Conditioned Air in the Drug Industry

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Skin Whitening Preparations: Their Composition
and Manufacture

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Contracts Awarded

Chicago Soap Award

In a recent opening by Chicago quartermaster, Samuel M. Sher Co., Chicago Heights, Ill. was awarded contract on 175,020 cakes laundry soap at a price of 4.75c per cake.

Kentucky Cleaner Award

Automotive Parts Co., Cincinnati, was recently awarded a contract on an alkali compound cleaner totalling \$48 and on a lacquer solvent cleaner totalling \$600, to be delivered to Kentucky quartermaster.

Texas Soap Awards

Day & Frick Co., Philadelphia was recently awarded contract on 10,000 10 oz. cakes grit soap at 2.35c for delivery to Texas quartermaster, and on 10,000 9 oz. cakes grit soap at 1.75c. The award on 257,200 lbs. laundry soap was given to Armour & Co., San Antonio, Tex., at a price of 5.1c.

Kirkman Gets Soap Award

In a recent opening for delivery to Brooklyn quartermaster, Kirkman & Son, Brooklyn, was awarded contract for 700,000 lbs. laundry soap at a price of 4.65c.

Post Office Soap Bids

In a recent opening by U. S. Post Office, Washington, D. C., the following were low bidders on 120,000 lbs. laundry soap, Colgate-Palmolive-Peet Co., Jersey City, 4.15c; Hecker Products Corp., New York, 4.68c; Iowa Soap Co., Burlington, Iowa, 4.72c; Procter & Gamble Distributing Co., Baltimore, 4.91c, and Pioneer Soap Co., San Francisco, 4.92c.

Brooklyn Soap Awards

The following awards were made on toilet articles to be delivered to Brooklyn quartermaster: On 313,600 tubes shaving cream, Trade Labs., Newark, 3.94c. On 313,600 tubes

tooth paste, Trade Labs., 3.07c, and on 313,600 cakes toilet soap, Hecker Products Co., New York was awarded contract with a price of 1.515c.

Fort Mason Soap Awards

In a recent opening by San Francisco quartermaster, awards were made as follows: Tiedemann & McMorran, San Francisco, was awarded contract on a quantity of metal polish at 8.247c; Newell-Gutradt Co., Portland, Oregon, on grit soap B, at 3.9c; Crystal Soap & Chemical Co., Philadelphia, on grit soap A, at 5.4c; Colgate-Palmolive-Peet Co., Berkeley Calif., on a quantity of laundry soap at 4.42c, and Newell-Gutradt Co. on a quantity of white toilet soap at 3c.

File Cleanser Bids

The following were low bidders on 8,000 cans of cleanser to be delivered to U. S. Marine Corps, Washington, D. C. Armour & Co., with the lowest bid of 2.49c; Industrial Distributors, Inc., 2.53c; Interboro Chemical Co., 2.79c, and Swift & Co., 2.96c.

Sweeping Compound Bids

Low bidders in a recent opening on 7,200 lbs. sweeping compound for delivery to U. S. Marine Corps, Washington, D. C. were: S. C. B. Industrial Co., 1.24c; Mathers-Lamm Paper Co., 1.25c; James Good, 1.27c, and Veteran Dust Exterminator Co., 1.42c.

Jeffersonville Soap Bids

The following were low bidders on a quantity of laundry supplies to be delivered to Jeffersonville quartermaster: On 200,000 lbs. laundry soap, Armour & Co., Chicago, 4.17c; Colgate-Palmolive-Peet Co., Jersey City, 4.49c; and Hecker Products Corp., 4.94c. On 25,000 cakes grit soap, James Good, Philadelphia, 2.86c; Hunnewell Soap Co., Cincinnati, 2c, and Crystal Soap &

Chemical Co., Philadelphia, 2.9c. On 10,000 cakes grit soap, Crystal Soap & Chemical Co., 3.1c; James Good, 3.3c, and Unity Sanitary Supply Co., New York, 3.8c. On 5,000 cakes toilet soap, Armour & Co., 2.9c; S. Strunz & Son, Pittsburgh, 3c, and Unity Sanitary Supply Co., 3.75c. On 20,000 cans lye, Buckeye Soda Co., Painesville, O., 4.37c; Pennsylvania Salt Mfg. Co., Philadelphia, 4.48c, and B. T. Babbitt, Washington, 4.9c.

Polish and Soap Bids

Low bidders on 4,500 gals. liquid metal polish for delivery to U. S. Post Office Dept., Washington, D. C., were: Charles Chemical Co., Scranton, Pa., 28.5c; Scranton Chemical Co., Scranton, 31.5c; R. M. Hollingshead Corp., Camden, N. J., 33c, and Uncle Sam Chemical Co., New York, 34.5c. On 140 kegs of automobile soap, Crystal Soap & Chemical Co., Philadelphia, 4.95c, and Harley Soap Co., Philadelphia, 5.15c. On 401½ bbls. automobile soap, Harley Soap Co., 4.7c; James Good, Philadelphia, 4.94c, and Crystal Soap & Chemical Co., 5.18c. On 50 bbls. automobile soap, Harley Soap Co., 4.45c, and James Good, 4.69c.

Marine Corps Soap Bids

The following were low bidders on 36,000 lbs. soap powder for delivery to U. S. Marine Corps, Washington, D. C.: Armour & Co., a price of 2.88c and Swift & Co., at 3.73c. On 12,000 lbs. toilet soap, Colgate-Palmolive-Peet Co., 7.76c, Hecker Products Corp., 7.93c. On 265 lbs. grit soap, Swift & Co., 8.93c, Colgate-Palmolive-Peet Co., 9.28c. On 12,000 lbs. laundry soap, Colgate-Palmolive-Peet Co., 4.57c, Swift & Co., 5.21c.

Want Soap Flakes

A concern in Brussels, Belgium, is interested in purchasing soap flakes. Interested American firms may communicate with them through the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., mentioning Inquiry No. 1931.



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WHEN PERFUMED WITH

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- Working samples on request -

CHARLES FISCHBECK CO. INC.
119 WEST 19th STREET
"Backed by a Quarter of a
Century of Experience"
NEW YORK

New Trade Marks

The following trade-marks were published in the June issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

P.S.—This in solid letters describing polishing wax. Filed by Puritan Soap Co., Rochester, N. Y., Apr. 15, 1937. Claims use since Jan. 30, 1935.

ALKALI PROOF—This in solid letters with the letters A and P in outline form, describing detergent. Filed by Fuld Bros., Baltimore, Mar. 15, 1937. Claims use since September, 1936.

FABRIXAID—This in outline letters with dark background describing cleaning fluid. Filed by Utility Products Co., Buffalo, N. Y., Apr. 12, 1937. Claims use since Apr. 8, 1937.

CLUBMAN—This in solid letters describing shaving cream. Filed by Pinaud, Inc., New York, Apr. 13, 1937. Claims use since Sept. 19, 1937.

OLD TOPPER—This in solid letters describing shaving soap. Filed by William A. Webster Co., Memphis, Tenn., Apr. 15, 1937. Claims use since July 22, 1936.

RED CROWN—This in solid letters describing scouring powder. Filed by Boyer Chemical Laboratory Co., Chicago, Apr. 24, 1937. Claims use since Mar. 2, 1937.

MOON ROSE—This in solid letters describing toilet soap. Filed by Record Supply Corp., Chicago, Apr. 24, 1937. Claims use since Feb. 19, 1936.

MOTH DRUM—This in solid letters describing moth preparations. Filed by Bloomingdale Bros., New York, Dec. 28, 1936. Claims use since Sept. 26, 1936.

HEIGH-HO—This in outline

letters, partly shaded, describing fly sprays. Filed by Ohio Oil Co., Findlay, O., Mar. 29, 1937. Claims use since Mar. 24, 1937.

KYNOL—This in outline letters describing tooth paste and anti-septic. Filed by Standard Drug Co., New York, Apr. 1, 1937. Claims use since Nov. 30, 1935.

SNOBOY—This in outline letters together with picture of boy bending over wash basket describing chemical preparation for bleaching, etc. Filed by A. F. Moore & Co., Worcester, Mass., Apr. 12, 1937. Claims use since December, 1936.

VEG-RO-SUL—This on stencil describing insecticides. Filed by General Chemical Co., New York, Apr. 21, 1937. Claims use since Mar. 11, 1937.

FOLIAFUME—This in solid letters describing insecticide. Filed by S. B. Penick & Co., New York, Apr. 27, 1937. Claims use since 1929.

LITHOCHROME—This in solid letters describing wax product. Filed by L. M. Scofield Co., Huntington Park, Calif., Apr. 2, 1937. Claims use since 1927.

RADIANT—This in solid letters with sunburst background describing polish and cleaner. Filed by Midway Chemical Co., Chicago, July 20, 1936. Claims use since June 30, 1925 on metal cleaners and polishes.

PURE-CLORE—This in solid letters describing cleanser and deodorant. Filed by Clor-O-Clean Chemical Co., Chicago, Dec. 23, 1936. Claims use since June 1, 1936.

PENETROL—This in solid letters describing cleaning preparation. Filed by Turco Prods., Los Angeles, Jan. 2, 1937. Claims use since April 3, 1934.

VITOL—This in solid letters describing cleanser. Filed by Turco Prods., Los Angeles, Jan. 2, 1937. Claims use since June 9, 1932.

PARAGLOSS—This in solid letters describing polish. Filed by Paragon Oil Co., Brooklyn, N. Y., March

19, 1937. Claims use since Sept. 1, 1936.

CLIX—This together with map of United States as a background. Filed by Charles Milman, Brooklyn, March 4, 1936. Claims use since Feb. 10, 1936.

AROMETTES—This in heavy-outline letters describing deodorants. Filed by Madeleine B. Taylor, Brooklyn, Feb. 4, 1937. Claims use since June 1, 1936.

PYRAFRICE—This in solid letters describing dentifrice. Filed by Charles M. Mutch, Toronto, O., March 3, 1937. Claims use since May 18, 1936.

ACTIROTE—This in solid letters describing insecticides. Filed by Hammond Paint & Chemical Co., Beacon, N. Y., April 3, 1937. Claims use since March 15, 1936.

INSECTI-SOL—This in solid letters describing deodorized kerosene. Filed by Pennsylvania Refining Co., Butler, Pa., Jan. 28, 1937. Claims use since July 1, 1935.

KOTA KOLOR—This in solid script describing coating for polishes. Filed by Lyman W. Carr, Fostoria, O., Feb. 12, 1937. Claims use since October, 1936.

CAVENCRAFT—This in solid letters describing wax polish. Filed by Cavendish Trading Corp., New York, April 22, 1937. Claims use since Oct. 1, 1936.

DETERGINE—This on stencil with dark background describing detergent. Filed by Benjamin L. Duryea, New York, Feb. 25, 1937. Claims use since May 1, 1900.

TRI-PHOS—This on stencil describing dry cleaning compounds. Filed by Tex-ite Products Corp., Brooklyn, March 26, 1937. Claims use since Aug. 24, 1924.

EARLY AMERICAN—This in solid letters describing saponaceous compounds. Filed by Shulton, Inc., New York, April 6, 1937. Claims use since April 2, 1937.

SPEEDY-PRE-SPOTTER—This in solid letters with diamond shaped mark describing cleanser. Filed by Chemical Products, Savannah, Ga., April 8, 1937. Claims use since Feb. 15, 1937.

KRANICH SOAPS

U. S. P.

POWDERED CASTILE SOAP

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ALSO a complete line of KRANICH QUALITY

Pine Scrub Soaps

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U. S. P. Potash Soaps

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GLYCERINE
METASILICATE
OXALIC ACID
POTASSIUM
CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE

CASTOR OIL
COCOANUT OIL
CORN OIL
COTTONSEED OIL
LARD OIL
NEATSFOOT OIL
OLEIC ACID
-RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPSEED OIL
ROSIN
SALAD OIL
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TALLOW

EASTERN INDUSTRIES, INC.

Vegetable Oils, Animal Oils, Fats, Chemicals

Ridgefield, New Jersey . . . Telephone MORsemere 6-5630

SANI-GROW — This in solid script describing insecticides. Filed by Delafield Nurseries, Aspinwall, Pa., Dec. 7, 1936. Claims use since Oct. 1, 1936.

VIO-SEPTIC—This in solid letters with circle background describing liquid antiseptic. Filed by Poehlmann Laboratory, San Rafael, Calif., Nov. 10, 1936. Claims use since April 15, 1935.

REXIDE—This in solid letters describing moth proof preparation. Filed by Rexair, Inc., Detroit, Jan. 29, 1937. Claims use since Jan. 20, 1937.

Z.C.A.—This in solid letters describing toothpaste and mouth wash. Filed by R. H. Macy & Co., New York, March 6, 1937. Claims use since Jan. 14, 1936.

GLEEM—This in solid letters describing deodorant and disinfectant. Filed by Claire Mfg. Co., Chicago, April 9, 1937. Claims use since Sept. 1, 1936.

MILKOPINE—This in solid letters describing deodorant and antiseptic. Filed by West Disinfecting Co., Long Island City, N. Y., April 10, 1937. Claims use since Jan. 21, 1937.

Trade Marks Granted

346.501. Cleaning Compound. Lawrence W. Baff, Brooklyn. Filed December 18, 1935. Serial No. 372,758. Published March 30, 1937. Class 4.

346.521. Oil Soap. Canfield Oil Co., Cleveland. Filed July 21, 1936. Serial No. 381,257. Published March 23, 1937. Class 4.

346.554. Saponaceous Material. B & L Laboratories, Chicago. Filed November 20, 1936. Serial No. 385,773. Published March 30, 1937. Class 4.

346.555. Soap and Cleaner. Ditto, Inc., Chicago. Filed November 21, 1936. Serial No. 385,836. Published March 30, 1937. Class 4.

346.569. Cleaning Compound. Super Nu-Wash Cleanser Co., St. Louis. Filed December 12, 1936. Serial No. 386,679. Published March 9, 1937. Class 4.

346.581. Insecticides. General Chemical Co., New York. Filed

December 24, 1936. Serial No. 387,120. Published March 2, 1937. Class 6.

346.582. Bedbug Destroyer. B. Heller & Co., Chicago. Filed December 24, 1936. Serial No. 387,128. Published March 16, 1937. Class 6.

346.586. Tooth Powder. T and T Tooth Powder Co., Flushing, N. Y. Filed December 28, 1936. Serial No. 387,229. Published March 16, 1937. Class 6.

346.590. Polish. Mid-Kent Products Co., Larkfield, England. Filed Dec. 30, 1936. Serial No. 387,284. Published March 23, 1937. Class 16.

346.599. Shaving Cream. Ashworth Advertising Co., New York. Filed January 2, 1937. Serial No. 387,363. Published March 23, 1937. Class 4.

346.605. Detergent. Cowles Detergent Co., Cleveland. Filed January 6, 1937. Serial No. 387,498. Published March 23, 1937. Class 4.

346.648. Insecticides. Black Flag Co., Baltimore. Filed January 25, 1937. Serial No. 388,118. Published March 23, 1937. Class 6.

346.725. T. D. Chamberlain Chemical Co., Scranton, Pa. Filed September 3, 1936. Serial No. 382,862. Published March 30, 1937. Class 16.

346.759. Dentrifrices. Marcus A. Fuller, Springfield, Mass. Filed December 2, 1936. Serial No. 386,208. Published March 16, 1937. Class 6.

346.760. Dentrifrices. Marcus A. Fuller, Springfield, Mass. Filed December 2, 1936. Serial No. 386,209. Published March 16, 1937. Class 6.

346.778. Insecticides and Fungicides. Hammond Paint & Chemical Co., Beacon, N. Y. Filed December 18, 1936. Serial No. 386,895. Published March 30, 1937. Class 6.

346.844. Insecticides. Mechling Brothers Chemical Co., Camden, N. J. Filed January 18, 1937. Serial No. 387,913. Published March 23, 1937. Class 6.

346.866. Insecticides and Cleaner. Derris, Inc., New York. Filed February 1, 1937. Serial No. 388,389. Published March 30, 1937. Class 6.

347.220. Rug and Upholstery Cleaner. Nu-Life Rug Cleaner Co., Cleveland. Filed March 6, 1936. Serial No. 375,643. Published April 6, 1937. Class 4.

347.221. Poisons. Bagnall Co., Kansas City, Mo. Filed March 31, 1936. Serial No. 376,619. Published April 13, 1937. Class 6.

347.246. Shampoos. Natone, Inc., Los Angeles. Filed October 3, 1936. Serial No. 383,936. Published April 13, 1937. Class 6.

347.258. Deodorant. Sun Myte Wash Products, Chicago. Filed November 12, 1936. Serial No. 385,446. Published April 6, 1937. Class 6.

347.278. Insecticides. General Chemical Co., New York. Filed December 24, 1936. Serial No. 387,121. Published April 6, 1937. Class 6.

347.283. Insecticides. Reefer-Galler, Inc., New York. Filed December 31, 1936. Serial No. 387,350. Published April 6, 1937. Class 6.

347.290. Soap Powder. Kali Manufacturing Co., Philadelphia. Filed January 5, 1937. Serial No. 387,468. Published April 13, 1937. Class 4.

347.300. Fungicide and Germicide. Pharma-Craft Corp., Louisville, Ky. Filed January 14, 1937. Serial No. 387,797. Published April 6, 1937. Class 6.

347.311. Silver Polish. E. Keller & Sons, Allentown, Pa. Filed January 21, 1937. Serial No. 388,006. Published April 6, 1937. Class 4.

347.314. Cleaning Soap. Gilbert and Dimitre, Eau Claire, Wis. Filed January 22, 1937. Serial No. 388,056. Published April 6, 1937. Class 4.

347.323. Cleansing Compound. V. C. Products Co., Philadelphia. Filed January 25, 1937. Serial No. 388,158. Published April 6, 1937. Class 4.

347.319. Detergent Composition. Cowles Detergent Co., Cleveland, Ohio. Filed January 25, 1937. Serial No. 388,122. Published April 6, 1937. Class 4.

(Turn to Page 141)



RAW MATERIALS

FOR THE SOAP INDUSTRY

FROM ALL PARTS OF THE WORLD

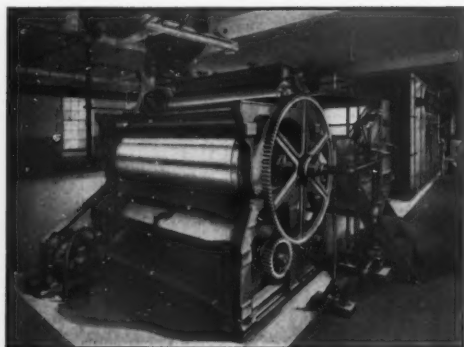
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Cocanut Oil	Peanut Oil	Lard Oils	Grease	Silicate Soda
Corn Oil	Perilla Oil	Neatsfoot Oil	Lanolin	Metasilicate
Cottonseed Oil	Rapeseed Oil	Oleo Stearine	Caustic Soda	Tri Sodium Phosphate
Palm Oil	Sesame Oil	Stearic Acid	Soda Ash	Di Sodium Phosphate
Palm Kernel Oil	Soya Bean Oil	White Olein	Caustic Potash	Chlorophyll
Olive Oil	Teaseed Oil		Carbonate Potash	"CEREPS" Superfatting Agent
			Sal Soda	

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Raw Material Markets

(As of June 28, 1937)

NEW YORK—The market for soap and sanitary products raw materials was unusually quiet this period. There were few price changes of any great importance, and buying was reported very slack. Soap makers have not been substantial buyers of fats and oils for the past sixty days, although there was a small flurry in the inedible fat group about two weeks ago, which was of short duration.

A rather unusual situation has characterized oil and fat prices over the past four months. During that period the spot price of coconut oil has dropped three and one-half cents a pound, while over the same period tallow and grease prices have shown only a fractional drop. On the face of it, this situation seems rather unusual, as it would normally be expected that soap makers would automatically turn to the cheaper fats—in this case the vegetable oils—bidding price levels up on these items, while allowing the inedible fat group to settle to a competitive level.

This has not happened in the present case, however, because of the fact that the vegetable oils such as coconut, palm, palm kernal, etc., are ordinarily contracted for as much as six months ahead by the large buyers. Week to week market fluctuations do not affect these buyers.—spot prices in this market being important only to the concern that must have an immediate tank of oil, or to the small concern that customarily buys in less than tank car lots. In the long run, however, a readjustment would seem to be indicated in the comparative price relationship of the two groups.

Another angle on the situation, however, leads one to suspect that the expected readjustment may be long in coming in the present case. The key to this explanation of the

present situation in oils and fats may be found in the recent Supreme Court decision in the coconut oil tax case. Perhaps soap makers were willing to pay a premium for coconut oil as long as they saw a possibility of getting their tax payments back if the tax on Philippine oil was declared unconstitutional. Soap makers could buy coconut oil six months ago and gamble on the court's decision. Now since the validity of the tax has been sustained, there is no longer any possibility of recovering, and no inducement to gamble. This factor may be responsible for the present unwillingness of buyers to pay more for coconut oil. It is interesting to note that coconut oil has dropped just about the amount of the tax,—3c—in excess of the drop in the inedible fat group, further bearing out this theory. At present levels, when the buyer adds the excise tax to the cost of his coconut oil, he finds that it costs him almost exactly the same price as an equal quantity of tallow.

FATS AND OILS

Coconut Oil

Philippine oil eased off further this period and is now quoted at 57 $\frac{1}{2}$ c per lb. for New York tanks, with Pacific coast tanks a quarter of a cent lower. Copra quotations are also lower, having dropped approximately a quarter of a cent per pound.

Palm Oil

Shipment prices eased off a quarter of a cent per pound this period, in spite of reported lightness of spot stocks. Now quoted at 43 $\frac{1}{2}$ c per lb. for futures.

Tallow

The tallow market reversed its recent trend for a time early this period, with an advance which carried city extra prices up as high as 8 $\frac{3}{4}$ c for a day or two. It is reported that there was some buying done by

soap makers on the advance, but after a short period, when real buying support failed to develop, the market eased off again. At the close, city extra was quoted at 8 $\frac{3}{4}$ c.

PERFUMING MATERIALS

Anise Oil

A more competitive situation has developed in this market over recent weeks, and prices are currently moving in favor of buyers. There was a moderate reduction this period, bringing the market level down to 70c per pound.

Citronella Oil

Ceylon oil is slightly higher in price this period, and now ranges from 42 to 44c in drums. Java oil is quoted a cent a pound cheaper in a quiet market.

Lemon Oil

There has been no further change in the price of American oil since the sharp drop last period. Italian oil, which also moved sharply lower following announcement of the cut in California oil, regained some of the lost ground this period. Messina oil is now held at a range of \$3.55 to \$3.75, which is 40c per pound higher than level of a month ago.

MISCELLANEOUS

Cresylic Acid

There has been no further change in cresylic acid or tar acid oil prices this period, following the advance of a few weeks ago. Stocks are currently reported to be very limited and the tight situation in supplies continues.

Borax

Announcement of an advance of \$2.00 per ton in borax prices was made this period, covering immediate deliveries and contract orders for the second half of the year. Boric acid prices are not affected.

CRESYLIC ACID AROMATICS

PHENYL ETHYL ALCOHOL BENZYL ACETATE
GERANIOL BENZYL ALCOHOL
CITRONELLOL BENZOPHENONE
ACETOPHENONE AMYL CINNAMICALDEHYDE

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Raw Material Prices

(As of June 25, 1937)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums.....lb.	\$.06	\$.06½
Acid, Boric, bbls., 99½%.....ton	95.00	100.00
Cresylic, drums.....gal.	.89	.93
Low boiling grade.....gal.	.92	.96
Oxalic, bbls.....lb.	.11½	.12¼
Adeps Lanae, hydrous, bbls.....lb.	.16	.18
Anhydrous, bbls.....lb.	.17	.19
Alcohol, Ethyl, U. S. P., bbls.....gal.	4.14	4.19
Complete Denat., SD 1, drums, ex. gal.	.32	.37
Alum. Potash lump.....lb.	.03¼	.03½
Ammonia Water, 26°, drums, wks....lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls. lb.	.08	.12½
Bentonite 1.....ton	—	16.60
Bentonite 2.....ton	—	11.00
Bleaching Powder, drums.....100 lb.	2.25	2.60
Borax, pd., cryst., bbls., kegs.....ton	47.00	67.00
Carbon Tetrachloride, car lots.....lb.	—	.05¼
Caustic, see Soda Caustic, Potash Caustic L. C. L.....lb.	.07	.08
China Clay, filler.....ton	10.00	25.00
Cresol, U. S. P., drums.....lb.	.12	.12½
Creosote Oil.....gal.	.13	.13½
Feldspar.....ton	14.00	15.00
(200 to 325 mesh)		
Formaldehyde, bbls.....lb.	.05¾	.06¼
Fullers Earth.....ton	15.00	24.00
Glycerine, C. P., drums.....lb.	.21½	.22
Dynamite, drums.....lb.	.21½	.22
Saponification, drums.....lb.	.15½	.16
Soap, lye, drums.....lb.	.14	.14½
Hexalin, drums.....lb.	—	.30
Kieselguhr, bags.....ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls.....per bbl.	1.70	2.20
Mercury Bichloride, kegs.....lb.	.71	.76
Naphthalene, ref. flakes, bbls.....lb.	.07¼	.07½
Nitrobenzene (Myrbane) drums.....lb.	.09	.11
Paradichlorobenzene, bbls., kegs.....lb.	.16	.25
Petrolatum, bbls. (as to color).....lb.	.02	.07¼
Phenol, (Carbolic Acid), drums.....lb.	.13¼	.14¼
Pine Oil, bbls.....gal.	.59	.64
Potash, Caustic, drums.....lb.	.06¼	.06½
Flake.....lb.	.07	.07¼
Potassium Carbonate, solid.....lb.	.07¼	.09½
Liquid.....lb.	.03½	.03¾
Pumice Stone, powder.....100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net) —		
Grade B to H, basis 280 lbs.....bbl.	8.95	8.95
Grade K to N.....bbl.	8.95	8.95
Grade WG and X.....bbl.	8.95	10.00
Wood FF Spot.....bbl.	8.86	9.95
Rotten Stone, pwd. bbls.....lb.	.02½	.04½
Silica.....ton	20.00	27.00
Soap, Mottled.....lb.	.04¼	.04¾
Olive Castile, bars.....lb.	.26	.35
Olive Castile, powder.....lb.	.28	.38
Powdered White, Neutral.....lb.	.19½	.21½
Olive Oil Foot, bars, 68-70%.....lb.	.09	.09½
Green, U. S. P.....lb.	.08	.09½
Tallow Chips, 88%.....lb.	.09	.09½
Soda Ash, cont., wks., bags, bbls. 100 lb.	1.23	1.50
Car lots, in bulk.....100 lb.	—	1.05
Soda Caustic, cont., wks., solid 100 lb.	—	2.60
Flake.....100 lb.	—	3.00
Liquid, tanks.....100 lb.	—	2.25

Soda Sal., bbls.....100 lb.	\$1.10	\$1.30
Sodium Chloride (Salt).....ton	11.40	14.00
Sodium Fluoride, bbls.....lb.	.07¼	.08¾
Sodium Hydrosulphite, bbls.....lb.	.19	.20
Sodium Silicate, 40 deg., drum.....100 lb.	.80	1.20
Drums, 52 deg. wks.....100 lb.	1.35	1.75
Tar Acid Oils, 15-25%.....gal.	.22½	.30½
Triethanolamine.....lb.	.20	.25
Trisodium Phosphate, bags, bbls.....lb.	.03	.03½
Zinc Oxide, lead free.....lb.	.06	.06¼
Zinc Stearate, bbls.....lb.	.20	.22

Oils — Fats — Greases

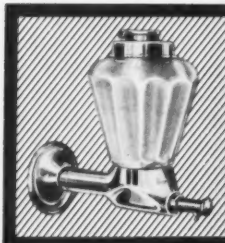
Babassu, tanks, futures.....lb.	.08¾	.09
Castor, No. 1, bbls.....lb.	.10¾	.11½
No. 3, bbls.....lb.	.10¼	.11
Coconut (without excise tax)		
Manila, tanks, N. Y.....lb.	.05½	—
Tanks, Pacific coast, futures.....lb.	.05½	—
Cod, Newfoundland, bbls.....gal.	.52	Nom.
Copra, bulk, coast.....lb.	.0340	.0350
Corn, tanks, mills.....lb.	.08½	Nom.
Cottonseed, crude, tanks, mill.....lb.	.08¼	—
PCY, futures.....lb.	.09¼	.09½
Degras, Amer., bbls.....lb.	.08¼	Nom.
English, bbls.....lb.	.08¼	Nom.
Neutral, bbls.....lb.	.12¾	Nom.
Greases, choice white bbls., fob		
Chicago.....lb.	.08½	.09¼
Yellow.....lb.	.08	.08¼
House.....lb.	.08	.08¼
Lard, City.....lb.	.12	.12¼
Compound tierces.....lb.	.13	.13¼
Lard Oil,		
Extra, bbls.....lb.	—	.13
Extra, No. 1, bbls.....lb.	—	.12½
No. 2, bbls.....lb.	—	.12
Linseed, raw, bbls.....lb.	.1100	.1140
Tanks, raw.....lb.	—	.1040
Boiled, 5 bbl. lots.....lb.	.1220	.1240
Menhaden, crude, tanks, Balt.....gal.	.45	Nom.
Oiticica Oil, tanks.....lb.	.11	Nom.
Oleo Oil, No. 1, bbls., N. Y.....lb.	—	.13
No. 2, bbls., N. Y.....lb.	—	.12½
Olive, denatured, bbls., N. Y.....gal.	1.50	Nom.
Foots, bbls., N. Y.....lb.	.11¼	Nom.
Palm, shipment.....lb.	—	.04¾
Palm Kernel, shipment.....lb.	—	.05¼
Peanut, domestic, tanks.....lb.	.08¾	Nom.
Rapeseed Oil, denat.....gal.	—	.95
Red Oil, distilled, bbls.....lb.	.11½	.12½
Saponified, bbls.....lb.	.11½	.12½
Tanks.....lb.	—	.10¾
Sesame Oil, dms.....lb.	.12	Nom.
Soya Bean, domestic tanks, saponified, f.o.b. West.....lb.	.10	—
Stearic Acid,		
Double pressed.....lb.	.12½	.13½
Triple pressed, bgs.....lb.	.15¼	.16¼
Stearine, oleo, bbls.....lb.	.09½	.09¾
Tallow, special, f.o.b. plant.....lb.	—	.08¼
City, ex. loose, f.o.b. plant.....lb.	—	.08¾
Tallow oils, acidless, tanks, N. Y.....lb.	—	.12
Bbls., c/1 N. Y.....lb.	—	.12½
Teased Oil, crude.....lb.	.09½	.09¾
Whale, refined.....lb.	.1010	.1030

Bobrick

SOP-O-ZON DISPENSERS

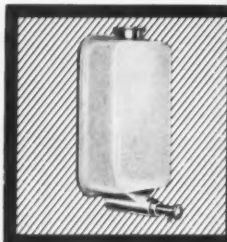
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No. 7-A—Bronze body, chromium finish, lock top, theft-proof bracket, new no-leak self cleaning valve. This dispenser with its streamlined design, (and colored glass jars if desired), is in keeping with the highest type modern plumbing installations. Also made with slab bracket for fastening directly on top of basin.



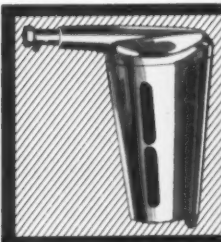
No. 9—A medium priced dispenser with the very desirable push-in-valve feature. Body and bracket of heavy pressed steel, nickel plated. Crystal clear, practically unbreakable glass jar. Fills at top. A dispenser that anyone can afford and will give years of consistently satisfactory service.

No. 10A—The heavy duty, theft proof dispenser. Heavy pressed steel body with vitreous porcelain enamel finish. Lock top. Equipped with the new "A" valve. Developed especially for railroad stations, bus terminals, schools, service stations and other places where dispensers receive unusually hard usage. No. 10—one pint. No. 12—one quart.



No. 829—Often called the Pullman Type. Fits on the basin in place of a hot water faucet. Soap jar is concealed under the basin, but fills through the top without removing. Used in railway cars and where it is desired to have the jar or soap container concealed.

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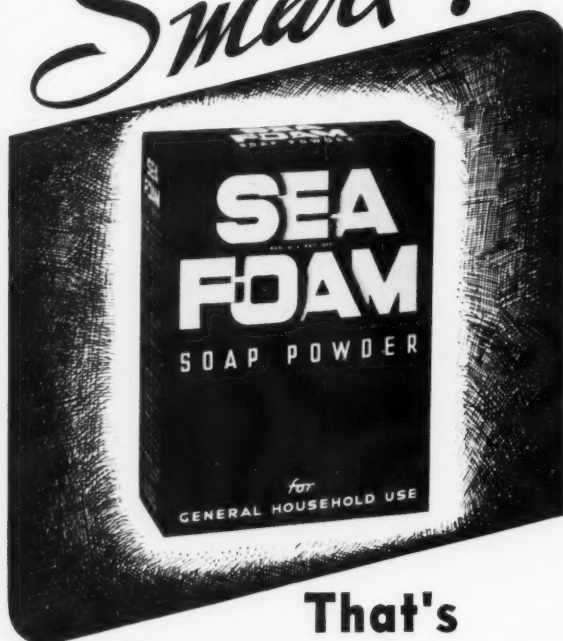
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Essential Oils

Almond, Bitter, U.S.P.	lb.	\$2.75	\$3.00
Bitter, F. F. P. A.	lb.	3.00	3.25
Sweet, cans	lb.	.85	.90
Anise, cans, U. S. P.	lb.	.70	.75
Bay tins		1.35	1.50
Bergamot, coppers	lb.	3.50	4.00
Artificial	lb.	1.25	1.40
Birch Tar, rect. tins	lb.	.65	.70
Crude, tins	lb.	.14	.17
Bois de Rose, Brazilian	lb.	1.25	1.35
Cayenne	lb.	2.75	3.00
Cade, cans	lb.	.38	.52
Cajeput, native, tins	lb.	.55	.58
Calamus, tins	lb.	3.00	3.50
Camphor, Sassy, drums	lb.	.16	.17
White, drums	lb.	.18	.19
Cananga, native, tins	lb.	1.75	2.25
Rectified, tins	lb.	3.00	3.35
Caraway Seed	lb.	2.10	2.25
Cassia, Redistilled, U. S. P.	lb.	1.00	1.05
Cedar Leaf, tins	lb.	.80	.85
Cedar Wood, light, drums	lb.	.26	.30
Citronella, Java, drums	lb.	.41	.42
Citronella, Ceylon, drums	lb.	.42	.44
Clove, U. S. P., tins	lb.	1.25	1.27
Eucalyptus, Austl., U. S. P. cans	lb.	.46	.54
Fennel, U. S. P., tins	lb.	1.05	1.10
Geranium, African, cans	lb.	4.75	5.25
Bourbon, tins	lb.	4.00	4.50
Turkish	lb.	3.10	3.20
Hemlock, tins	lb.	1.05	1.10
Lavender, U. S. P., tins	lb.	2.25	6.00
Spike, Spanish, cans	lb.	1.05	1.10
Lemon, Ital., U. S. P.	lb.	3.55	3.75
Cal.	lb.	2.60	—
Lemongrass, native, cans	lb.	.50	.52
Linaloe, Mex., cases	lb.	1.15	1.20
Nutmeg, U. S. P., tins	lb.	1.40	1.42
Orange, Sweet, W. Ind., tins	lb.	2.10	2.20
Italian cop	lb.	2.75	3.50
Distilled	lb.	—	.90
Cal.	lb.	2.50	—
Origanum, cans, tech.	lb.	1.00	1.25
Palmarosa	lb.	3.10	3.20
Patchouli	lb.	5.00	8.00
Pennyroyal, dom.	lb.	1.65	1.75
Imported	lb.	1.50	1.60
Peppermint, nat., cans	lb.	2.40	2.50
Redis., U. S. P., cans	lb.	2.70	2.80
Petitgrain, S. A., tins	lb.	1.10	1.20
Pine Needle, Siberian	lb.	.90	1.00
Rose, Natural	oz.	5.25	22.50
Artificial	oz.	2.00	3.00
Rosemary, Spanish, tins	lb.	.60	.65
drums	lb.	.55	.60
Sandalwood, E. Ind., U. S. P.	lb.	4.80	5.50
Sassafras, U. S. P.	lb.	.90	1.05
Artificial, drums	lb.	.39	.40
Spearmint, U. S. P.	lb.	1.90	2.00
Thyme, red, U. S. P.	lb.	.95	1.25
White, U. S. P.	lb.	1.05	1.35
Vetivert, Bourbon	lb.	9.00	18.00
Ylang Ylang, Bourbon	lb.	3.50	6.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	\$1.25	\$2.25
Amyl Cinnamic Aldehyde	lb.	1.55	2.00
Anethol	lb.	1.15	1.20
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.30
Benzyl, Acetate	lb.	.55	1.00
Alcohol	lb.	.65	1.15
Citral	lb.	1.70	3.15
Citronellal	lb.	1.10	1.25
Citronellol	lb.	1.90	2.15
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide		.70	1.00
Eucalyptol, U. S. P.	lb.	.63	.65
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	.75	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.00	2.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.25	5.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	1.70	2.55
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.75
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	4.20	5.00
Ketone	lb.	4.35	5.25
Xylene	lb.	1.25	2.00
Phenylacetaldehyde	lb.	4.80	8.00
Phenylacetic Acid, 1 lb., bot.	lb.	2.50	3.25
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.00	4.50
Rhodinol	lb.	5.75	8.00
Saflor	lb.	.47	.50
Terpineol, C. P., 1,000 lb. drs.	lb.	.23	.25
Cans	lb.	.27	.30
Terpinyl Acetate, 25 lb. cans	lb.	.80	1.00
Thymol, U. S. P.	lb.	1.70	1.95
Vanillin, U. S. P.	lb.	3.75	4.00
Yara Yara	lb.	1.30	2.00

Insecticide Materials

Insect Powder, bbls.	lb.	.18	.20
Concentrated Extract			
5 to 1	gal.	1.25	1.30
20 to 1	gal.	4.40	4.60
30 to 1	gal.	6.40	6.60
Derris, powder—4%	lb.	.33	.38
Derris, powder—5%	lb.	.39	.44
Cube, powder—4%	lb.	.23	.28
Cube, powder—5%	lb.	.28	.33

Gums

Arabic, Amb. Sts.	lb.	.14½	.15
White, powdered	lb.	.17	.18
Karaya, powdered No. 1	lb.	.12	.13
Tragacanth, Aleppo, No. 1	lb.	2.75	3.00
Flake	lb.	.50	1.00

Waxes

Bees, white	lb.	.40	.42
African, bgs.	lb.	.29	.30
Refined, yel.	lb.	.35	.39
Candelilla, bgs.	lb.	.14½	.15
Carnauba, No. 1	lb.	.47½	.48
No. 2, N. C.	lb.	.42	.43
No. 3, chalky	lb.	.38	.39
Ceresin, yellow	lb.	.08½	.11
Paraffin ref. 125-130	lb.	.0455	.04¾

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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

MEDICATED SOAPS

MEDICATED soaps must naturally be of high quality. Among the animal fats, pure tallow and lard are preferable, and among the vegetable oils, linseed oil, coconut oil and olive oil. Fillers and perfumes are excluded, owing to possible irritant action on the skin. For superfatted medicated soaps, lanolin is highly suitable, while alkaline soaps should have their excess alkali in the form of soda ash rather than as caustic soda.

Formaldehyde soaps are widely used by hospitals because of their strong antiseptic action. Liquid formaldehyde-soap preparations must be stored in well-closed bottles, owing to the volatile nature of formaldehyde. Such a liquid may be prepared as follows: Saponify 30 parts of coconut oil with 8 parts of pure caustic potash in 20 parts of water and about 10 parts of denatured alcohol. Mix vigorously until a uniform, pasty, transparent mass is formed. Stir in sufficient 40 per cent formaldehyde solution while the soap is still warm to bring the weight to 100 parts. Solution is immediate. Let stand to settle. The alcohol is necessary in order to produce a readily soluble soap, as an alcohol-free preparation turns cloudy with water. If much free alkali is present in the solution, the latter remains clear for a while

but eventually deposits a dark sediment.

While phenol or carbolic acid is a strong disinfectant, this action is greatly weakened by combination with alkali. Sodium phenolate has a relatively small disinfectant power. The optimum disinfectant effect of phenol soap is obtained with a ratio of 1 part of soap to 1 part of phenol. Such a mixture can be used in 4 per cent aqueous solution. Cresols may be substituted for phenol to give about the same disinfectant action. A phenol toilet soap may contain 25 parts by weight of curd soap to 1.3 parts by weight of crystalline phenol. Mix the curd soap chips with phenol which has been melted on a water bath. Pass the mixture through the rollers two or three times. Plod and cut into bars in the usual manner. Since phenol makes the soap somewhat soft, it is advisable to use a higher proportion of hard fats for the curd soap.

Salicylic acid is not a strong antiseptic but is especially useful in counteracting odor from perspiration. Soaps containing salicylic acid, like those containing phenol, do not keep well in the liquid form. A milled soap is made containing 25 parts by weight of curd soap, 0.5 part of lanolin, and 2 parts of salicylic acid. The ingredients are mixed and put through the rollers 3 or 4 times. Salicylic

acid soap pastes are prepared by incorporating the acid in a potash soap containing water, with a high petroleum jelly content.

Borax is added to soap in a proportion of 5 to 10 per cent of the weight of curd soap. It should be added only after saponification is complete so that it will not react and thus displace part of the saponification alkali.

Camphor soaps are made in solid and paste form. Their field of usefulness is in protection against chapped skin. The usual content of camphor is 5 per cent, but this can be reduced to 1 per cent.

Soaps containing mercuric iodide are the most common mercury soaps. They are prepared in solid form. The mercuric iodide is dissolved in a hot aqueous solution of potassium iodide and the solution incorporated into the previously prepared curd soap chips. Mercuric chloride is more difficult to incorporate. Better results are obtained with mercury oxycyanide. Mercury soap is particularly popular as a disinfectant in gynaecology. It is claimed that a considerable increase in the absorptive powers of soap for mercury salts can be brought about by including a proportion of cresol.

Sulfur soaps have been used both for medicinal and cosmetic purposes. Sulfur flowers or colloidal

sulfur are generally used. The flowers may be added to the caustic lye or to the prepared soap mass. Another method of preparation is to dissolve potassium sulfide in a minimum amount of hot water and add this in a proportion not exceeding 30 per cent, to the hot soap mass. The final proportion of sulfur in ordinary sulfur soaps ranges from 3 to 10 per cent. Sulfur soaps are frequently prepared in combination with beta-naphthol, tar, glycerin or camphor. They are also frequently superfatted.

Tar soaps and shampoos enjoy wide popularity. Coal tar or wood tar may be worked into the finished soap. A product known as "Anthrasol" (German Patent No. 166,975 of Knoll & Co.) combines a powerful odor with a pale color and is suitable for light colored soaps. In the case of cold-process soaps, the tar is blended with the soap mass before pouring into molds. In the case of liquid soaps or shampoos it is usually dissolved in the saponified lye together with glycerin and a little alcohol.

Lecithin is used in cosmetic rather than in medicated soaps, and is a superfatting agent having a softening effect on the skin. Lecithins are extracted by various methods from oils and fats. Their incorporation in soap is somewhat of a problem, because both animal and vegetable lecithin contain 40 to 60 per cent of oil for stabilizing purposes, which would cause rancidity when blended with soap. There would be no point in saponifying oil containing lecithin because saponified lecithin, and also oxidized lecithin, are ineffective as skin softeners. Rancidity can be effectively retarded only by means of preservatives. An example would be addition of 0.2 per cent of methyl *p*-hydroxybenzoate and 0.1 per cent of hexamethylene tetramine to a soap containing 5 per cent of a vegetable lecithin-oil preparation. Other methods of treatment are based on mixing lecithin immediately after de-oiling, with such substances as white petroleum jelly, liquid paraffin, or pure wool fat,—the last being preferable.

J. Davidsohn and A. Davidsohn. *Soap, Perfumery & Cosmetics* 10, 400-404 (1937).

Method of Filling Soap Cakes

Soap tablets having holes or channels filled with fat, wax, fatty acid, sulfonated fatty acid or an ester thereof, or fat-like hydrocarbon, are provided with a separate insoluble coating between the soap and the filling. The filling may contain perfume, cosmetics, coloring, emulsifying, curative, germicidal or insecticidal substances. The coating may be formed by (1) coating the channels with varnish or hardened gelatin; (2) introducing into the channels a solution of a salt of calcium, aluminum, magnesium, zinc or other metal that will form an insoluble soap with the tablet soap; (3) giving the filling a content of such a metal salt or other substance as will react with the tablet soap or with a substance added to it, e. g., albumin or gelatin may be added to the tablet soap and formalin to the filling; or (4) charging the filling with sufficient insoluble soap of calcium, aluminum, etc. The latter may be carried out by dissolving the metallic soap in the heated filling before this is inserted into the channels. When the filling cools, metallic soap will settle out at the surface. Geo. V. Kereszty. British Patent No. 457,976; through *Chem. Abs.*

Sulfite Liquor for Soap

Sulfite waste liquor is available in large amounts from the preparation of cellulose from wood pulp. The use of this waste liquor in the manufacture of soap is not new, but previously it resulted in an undesirably dark soap, which consequently had no sale. A method of treating sulfite waste liquor so that it can be used to give a light colored soap, has been devised. The treatment depends on the use of special apparatus termed a "molaroid" mill. It does not produce a colorless liquid but modifies it in some way so that when used in soap the liquid does not give a dark color. It is particularly suited to the production of soft

soap but can also be used in making hard soap containing as much as 50 per cent of fatty acids. The liquor is said to contain lignin sulfonic acids, which would have the usual properties of sulfonic acids. The crude waste liquor contains 10-12 per cent of organic matter.

Mineral matter such as calcium and iron are rendered harmless by being precipitated. The colloidal nature of the organic matter in the liquor makes soap containing it suitable for use with sea water. A soft soap containing 20 per cent of fatty acids can be reduced to 10 per cent of fatty acids, by using 10 per cent of the new material, thus saving in this particular case 50 per cent of fatty ingredients. *Les Matieres Grasses* 29, 122-3 (1937).

Washing Power of Colloids

The detergent action of hydrated colloids is associated with their surface-active properties. These include their ability to be adsorbed preferentially on surfaces to be cleaned, thus displacing the dirt from the surface; their ability to form protective films around particles of dirt; and their ability to lower surface tension and to form elastic films at interfaces. Washing tests on wool with solutions containing gelatin, casein peptized with sodium hydroxide, sodium protalbin and starch, together with soda ash, with and without the addition of sodium oleate soap, showed that starch not only has no washing power but decreases that of soap. The proteins have washing ability both when used alone and in combination with soap. In this respect sodium caseinate and sodium protalbin are far superior to gelatin. Kurt Lindner. *Fette und Seifen* 43, 214-18, 253-6; 44, 47-51 (1937); through *Chem. Abs.*

Dish-Washing Composition

A product for washing dishes contains 75 parts of anhydrous sodium carbonate, 15 parts of trisodium phosphate, and 10 parts of sulfated fatty alcohols. Just Alix. French Patent No. 805,062.

Peptization of Soap Solutions

VARIOUS substances have been added to soaps for commercial purposes: alcohol and sugar to make it transparent; phenol and cresols as disinfectants; glycerine for bubble formation. It has been known for a long time that phenol and cresol are very much more soluble in soap solutions than in water, but the fact that this increase in solubility is mutual should be emphasized. For example, gel formation of an oleate-cresol-water system marks only the first stage of an action which, with larger amounts of cresol, is clearly seen to be a peptization. In other words, with larger amounts of cresol, a liquid instead of a gel is obtained. It is now found that numerous alcohols, phenols and amines exert a similar action. When a small amount is added to a soap-water mixture, a stiff gel is formed. When further amounts are added, the viscosity decreases, usually below the original value. This therefore constitutes a means of increasing the fluidity of soap solutions.

A solution of 0.1 N sodium stearate was prepared and, after taking a blank sample which was left to cool, small amounts of trial peptizers were added. Mixing was usually carried out with warm soap solution to avoid the early gel stage. The blank set to the usual lump of curd. Normal saturated alcohols up to C_{12} gave clear liquid systems at room temperature. So do phenol, cresol, cyclohexanol, benzyl alcohol, aniline and phenylhydrazine in small concentrations. Glycerine and glycol are efficient in larger amounts and ethyl alcohol moderately so. Thymol, the naphthols, benzidine and camphor all peptize at higher temperatures but deposit solids on cooling.

The chief difficulty in explaining these observations is that the soap-water systems themselves are not fully understood. On cooling a

hot soap solution, the following changes occur:

1. The hot solution is optically empty. Soap is partly molecularly dispersed, partly colloiddally dispersed as small micelles; some 30 molecules per micelle.

2. On cooling, a point is reached where the solubility is suddenly largely reduced and the system becomes opaque and very viscous. This is the state of soft soap.

3. On further cooling, an abrupt transition occurs to the very opaque hard white curd. The temperature difference between 2 and 3 is small.

Potassium soaps do not reach stage 3 at ordinary temperatures and remain as soft soaps. If they are salted out with sufficient potassium chloride, curd is formed. The long-chain sulfates and sulfonates do not pass through the soft soap stage but crystallize directly from stage 1 to stage 3. This presumably is because their temperature of transition to curd is above their Krafft points.

The intermediate soft soap stage is thought to be due to formation of secondary micelles by aggregation or association of $-COONa$ groups. The action of the peptizer is then easily explained as prevention of this association by dipole interaction between peptizer and these polar groups. In other words, instead of an association of like soap molecules, an association of the more soluble peptizer with soap molecules occurs. When the temperature is lowered so far that the complex is no longer soluble, association to the curd phase follows with elimination of peptizer.

The view that the peptized systems are in stage 1, that they are mainly colloiddally dispersed with a small amount molecularly dispersed, is supported by their optical properties.

The amount of peptizer taken up at saturation varies from less than 1 molecule per molecule of soap, to 17. The complexes exist only in solution. A. S. C. Lawrence. *Trans. Faraday Soc.* 33, 325-30 (1937).

More than 400 preparations are made for washing purposes in central Europe and more than 200 of these do not contain soaps or sulfonated fatty acids nor do they depend on a carboxyl group for their cleaning action. To make a qualitative test on an unknown of this general nature, dissolve 10-15 grams of sample of the commercial preparation in 100-200 cc. of water. If an insoluble residue remains, filter. Determine the nature of the reaction of the filtrate with (1) 1 per cent acetic acid, (2) a saturated solution of calcium sulfate, (3) neutral lead acetate solution and (4) barium chloride solution. The reactions enable one to identify the preparations as (1) soaps, (2) sulfonated neutral fatty acids, (3) sulfonated fatty alcohols, and (4) Igepons and Lam-epones. Remove the precipitates and continue with semi-specific tests. Free sulfates indicate Igepon A, free sulfates plus nitrogen show Igepon T, a biuret test in the absence of proteins or peptones indicates Lam-epones. Anselm Bohanes. *Chem. Obzor* 11, 155-8; through *Chem. Abs.*

Potassium or sodium soap is given an addition of chlorinated hydrocarbon to form moldable soap. The hydrocarbon is introduced into the soap by the aid of a water-soluble monoalkyl ether of glycol. Thus, soft soap is heated and stirred with the monobutyl ether of glycol. Carbon tetrachloride is then added to give a soap-like mass from which no carbon tetrachloride separates when dissolved in water. I. G. Farbenind. A.-G. German Patent No. 639,733; through *Chem. Abs.*

Products and Processes

Cold Stirred Soap

Cold stirred soap is made with about 70 per cent of coconut oil and 30 per cent of other fats, which may include tallow, lard, castor oil, peanut oil, etc. About 5 per cent of the caustic soda used may be replaced by caustic potash. At least 2 per cent of a superfatting agent such as cereps or lanolin should be present. The content of unsaponified neutral fat should not exceed 0.15 per cent and the content of free alkali should not be more than 0.02-0.03 per cent. The question of sensitivity of the skin to coconut oil is individual rather than general. Some people show an immediate skin irritation with coconut oil soap, while others can use it constantly with no bad effects. Monsoin. *Deutsche Parfümerie-Ztg.* **23**, 180-181 (1937).

Hair-washing Agent

An agent suitable for washing hair is made by rendering neutral or acid by means of a compound of moderately acid reaction, a water-soluble salt of a high-molecular weight aliphatic carboxylic acid that is linked to the carboxyl group through a nitrogen atom but not through an oxygen atom. An example is the salt of coconut fatty acid sarcoside. I. G. Farbenindustrie A.-G. British Patent No. 459,039; through *Chem. Abs.*

Jelly-Like Soaps

Moldable jelly-like or solid masses are formed from sodium or potassium soaps, by adding polyglycol ether, especially polyethylene glycol ether, and liquid hydrocarbons or chlorohydrocarbons. These substances may be added before, during or after saponification. For example, the monoethyl ether of polyethylene glycol is mixed with linseed oil and the oil saponified with caustic potash. Carbon tetrachloride is added. The

product is a jelly-like soap. I. G. Farbenind. A.-G. German Patent No. 639,583; through *Chem. Abs.*

Soap with Low Moisture Content

An apparatus for manufacturing soap with a low moisture content consists of a heater, means for delivering a mixture of reacting materials to this, and an automatic method of controlling the heat under the mixture so that vapor will separate and the proportion of vapor in the products leaving the heater will be substantially constant. A method for separating the reaction products from the vapor is also provided. Refining, Inc. British Patent No. 458,600; through *Chem. Abs.*

Shampoo for Greasy Scalps

A shampoo suitable for use on an abnormally greasy scalp contains the following:

	Parts
Oil of cade.....	2
Thymol	1
Green soft soap ...	33
Industrial alcohol ..	64

The shampoo should be rubbed into the scalp and left for 5 minutes before wetting the hair with water and rinsing. Frank H. Sedgwick. *Soap, Perfumery & Cosmetics* **10**, 418 (1937).

Noncorrosive Antifreeze

An antifreeze solution which is noncorrosive contains a relatively small quantity of a soluble salt of mercaptobenzothiazole with a relatively large quantity of glycerin containing an oil and an emulsifying agent. The Assoc. of Am. Soap & Glycerine Producers, Inc. Canadian Patent No. 366,297.

Soap Preparations

Soap preparations contain a soap and a water-soluble salt of an aliphatic carboxylic acid containing an aliphatic radical of at least 10 carbon atoms which is linked to the

COOH groups through at least 1 atom of the group, nitrogen, oxygen and sulfur, but not through 2 or more different atoms of the group. An example is the alkali salt of lauryl-propylaminoacetic acid. I. G. Farbenindustrie A.-G. British Patent No. 459,040; through *Chem. Abs.*

Detergent and Bleaching Agents

Detergent and bleaching agents contain a hydrocarbon chain of at least 6 carbon atoms, a hydrophilic end group, and substituents farther removed than the β -position connected to the main chain by carbon, oxygen or nitrogen bonds. The side chain is generally lipophilic. An example is the dibutyl ether derived from coconut oil fatty acids condensed with taurine. N. V. Chemische Fabriek "Servo" and M. D. Rozenbroek. Dutch Patent No. 38,276; through *Chem. Abs.*

Semi-boiled Laundry Soap

A laundry soap which can be prepared by the semi-boiled process may be made from the following ingredients: 20 parts of coconut or palm kernel oil, 10 parts of tallow, 10 parts of lard, 8 parts of bleached palm oil and 27 parts of 38° Be. caustic soda solution. From 10 to 20 parts of waterglass and potash may be used as fillers. *Seifensieder-Ztg.* **64**, 179 (1937).

Transparent Paste Soap

A paste soap which will be transparent can be prepared from such vegetable oils as peanut oil, cottonseed, soybean, linseed, etc., or from the fatty acids of these oils. Caustic potash is used for saponification and potash for filling. *Seifensieder-Ztg.* **64**, 197 (1937).

Cleansing Agents

Cleansing and emulsifying agents are obtained by esterifying aliphatic or hydroaromatic sulfonic acids of high molecular weight with aliphatic, aromatic or hydroaromatic alcohols or phenols. Oranienburger chem. Fab. A.-G. German Patent No. 642,414; through *Chem. Abs.*

Lecithin as Soap Addition

When lecithin is added to soap it must be added after saponification, since it is itself saponifiable. Lecithin increases the drop number against kerosene in low soap concentrations. Foam number and stability are increased, but the foam volume is lower. Turbidity and transparency temperatures of soap solutions are lowered. Lecithin aids the detergent action of soap because of its emulsifying power and the formation of a soft clinging foam. It is suitable as a superfatting agent because it counteracts alkalinity. From 1 to 10 per cent is recommended. Lecithin is also used as an emulsifying agent for solvents in soaps. G. A. Wieseahn. *Oil & Soap* **14**, 121 (1937).

Effect of Glycerin on Soap

A study of the effect of glycerin on the equilibria of soap systems which may exist during the soap boiling process indicates that no new phases are produced by glycerin. The effect of glycerin shows a remarkable similarity to the effect of water on soap. At 90°C. if dry tallow soap is added to water, a saturated solution or nigre is formed at a concentration of about 26 per cent soap, and the saturated phase is middle or gum soap. If dry tallow soap is added to glycerin the solution becomes saturated at 28 per cent soap and again the saturation phase is middle soap.

The influence of glycerin on electrolyte is not very great in quantities up to 9 per cent of the former, although the salt concentration necessary to produce heterogeneity is definitely raised for each increase in glycerin content. At 100°C. the effect is such that an increase in glycerin content of 3 per cent raises the electrolyte needed for salting out by about 0.3-0.4 per cent.

The ratio of glycerin in the soap-rich layer to glycerin in the water-rich layer is about 0.36. When neat-nigre-lye is present, the distribution ratio between the neat and lye is 0.31 and this ratio holds for all strengths of electrolyte in the

layer. The ratio of glycerin in the water of the lye to glycerin in the water of the soap averages about 1.13. The results show an approach to a ratio of 1.0 as the electrolyte strength increases or as the soap becomes more grainy. R. H. Ferguson. *Oil & Soap* **14**, 115-8 (1937).

Spray Drying of Soap

The two methods of spray drying by a jet under pressure or by centrifugal force are discussed. These are illustrated with commercial apparatus. The application of spray drying is being rapidly extended to the soap and other industries. A. Antoni. Chem. Eng. Congr. World Power Conf. 1936, Advance proof No. C19, 26 pp.; through *Chem. Abs.*

Sulfur Acids for Soap Use

Soap-forming acids are made by combining organic compounds free from COOH groups but containing at least 6 carbon atoms and at least 1 olefinic double bond, with mercapto acids or their derivatives. Cycloolefins or mixtures of olefin and paraffin may be used. Examples of the products are dodecylthioglycolic acid and cyclohexylthioglycolic acid. Henkel & Cie. G.m.b.H. French Patent No. 804,922; through *Chem. Abs.*

Wetting Agents from Lanolin

In mixtures of higher fatty acids and alcohols such as are obtained from the saponification of lanolin, spermaceti, etc., the alcohols are converted into phosphoric esters, a polyhydric alcohol such as glycol or glycerine added, and the mixture heated and finally sulfonated at a low temperature. N. V. Chemische Fabriek "Servo" and M. D. Rozenbroek. Dutch Patent No. 39,171; through *Chem. Abs.*

Antioxidant from Sesame Oil

Fat, particularly edible fat such as lard, is stabilized by thoroughly incorporating with it a quantity of a distillate obtained by the deodorization of hydrogenated sesame seed oil. The Industrial Patents Corp. Canadian Patent No. 366,139.

Control of Foaming Power

The thickness and stability of foam from soap solutions are functions of the composition of the fats used in making the soap, although other considerations such as temperature and concentration enter in. The presence of soft fats such as coconut oil and palm kernel oil in relatively large amounts produce quick and copious foam. Unsaturated, high molecular-weight fats foam with difficulty at ordinary temperatures, but more readily at increased temperatures. The foam is thick, consisting of small bubbles, and is more stable than the quick-forming, large-bubble foam produced by coconut oil and palm kernel oil soap. Soaps made from hard fats containing stearin, such as tallow, bone fat, bleached palm oil, hardened fats, etc. foam better at elevated temperatures than at ordinary temperatures. *Seifensieder-Ztg.* **64**, 250 (1937).

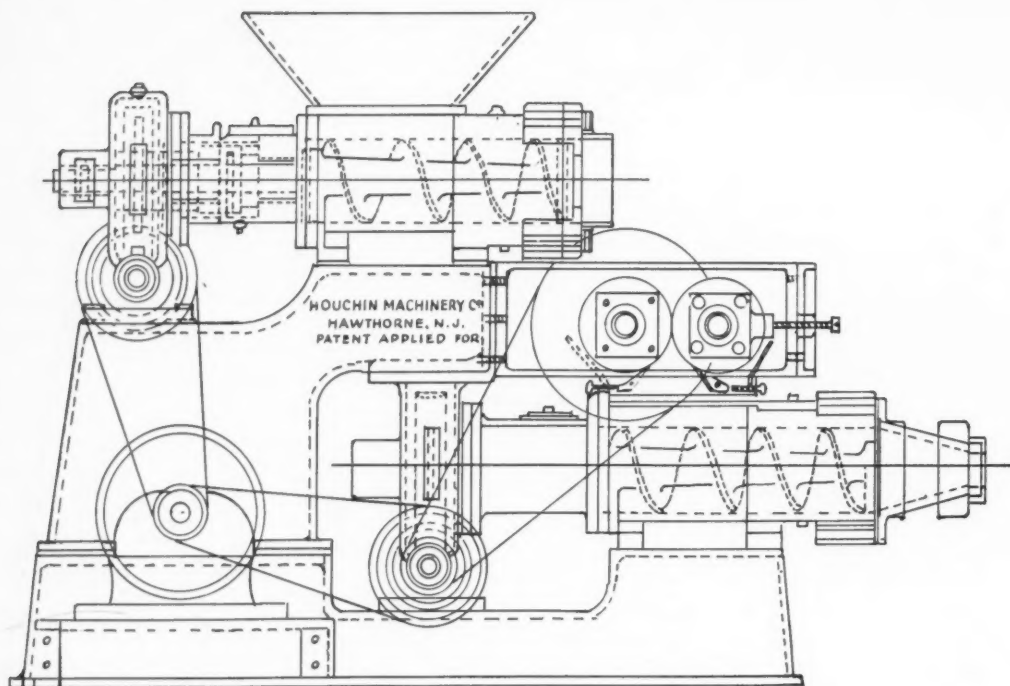
Corrosive Effect of TSP

The effect of sodium chromate, sodium perborate and sodium metasilicate in lessening the corrosive action of trisodium phosphate was tested. From 3 to 5 per cent of sodium chromate, based on the weight of trisodium phosphate used, was found to prevent corrosion. Bacterial counts prove that trisodium phosphate solution is an effective detergent. L. A. Rogers and Fred R. Evans. *J. Dairy Sci.* **19**, 733-8 (1936).

Methods for Iodine Values

The Hubl method for the determination of iodine number gives low and varying results as a general rule. The Wijs method yields higher values, indicating the formation of substitution products, in addition to the normal addition compounds. The Hanus methods give steady results, but only on short standing of the reaction mixture. The Kaufmann method gives the best values under all conditions. N. N. Godbole, V. V. Ketkar, K. V. J. S. Sharma and H. R. Kamath. *Current Sci.*, **5**, 361-4 (1937); through *Chem. Abs.*

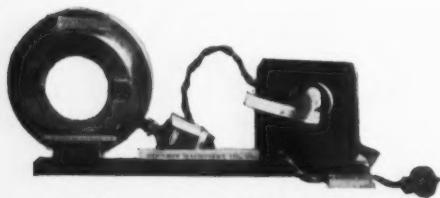
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COMBINATION PLODDERS

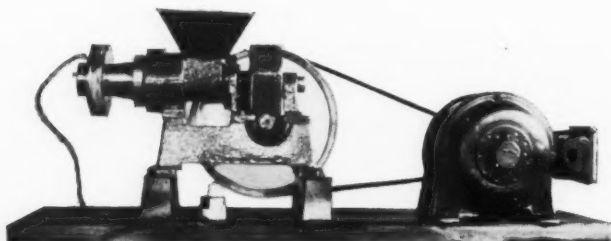
With Double Head and Milling Attachment With Motor

Soap passing through the first time produces ribbons of soap. Second passing produces a fine finished, well compressed bar of Soap. For the second passing, remove Short Head on Second Plodder, bring Long Finishing Head in place. This Head is fitted with our Electric Heater and Plate Holder. A small stream of water passing through Plodder Cylinders and Rolls of Mill keeps the Soap cool, preventing the Soap from blistering. There is no dropping of Soap. The machine is very easily cleaned. It is excellent for short runs of Soap and saves Horse-Power.



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By using this unit instead of steam, gas or lamp a uniform heat can be maintained. No more blistered soap. Made to fit all Plodders.



**Laboratory Plodder, complete with Motor,
Electric Heater, and Plate Holder.**

Soybean Phosphatides

The phosphatides extracted from soybeans by hot ethyl alcohol appear to consist of two types of phosphatides in addition to cephalin and lecithin. Fractionation of the hot ethyl alcohol extract yielded (a) Nonprotein nitrogenous compounds containing no phosphorus; (b) monoaminodiphosphorus compounds; (c) diaminomonophosphorus compounds; and (d) monoaminomonophosphorus compounds containing only half as much nitrogen and phosphorus as lecithin and cephalin. These monoaminomonophosphorus compounds, which are insoluble in acetone, were fractionated into: (a) A compound insoluble in cold ethyl alcohol, about 50 per cent of which is probably cephalin; and (b) a compound soluble in cold ethyl alcohol which appears to be a derivative of lecithin. R. S. McKinney, G. S. Jamieson and W. B. Holton. *Oil & Soap* **14**, 126-9 (1937).

Study of Fatty Acids

The free fatty acids present as a result of the action of enzymes on soybean-oil soap stock were distilled off. The residual fat was then split and fatty acids again distilled off. For comparison, the same kind of oil was first partially split, the fatty acids distilled off, and the residue subjected to further hydrolysis and distillation. A study of the fatty acids obtained showed that neither enzyme hydrolysis nor partial hydrolysis in an autoclave shows any preferential action. In other words, fatty acids of high molecular weight were not liberated in preference to fatty acids of low molecular weight, nor unsaturated acids in preference to saturated acids. Josef Hetzer. *Fette und Seifen* **43**, 257-8.

Fat by Cold Method

Fat can be extracted quantitatively from oil seeds and drugs by a cold method if the material is thoroughly rubbed with the solvent. Rub to a pulp 2-5 grams of the sample in the presence of the solvent, using a pestle. Transfer the

pulpy mass to a funnel 185 mm. long and 30 mm. in diameter filled with a cotton filter. Wash 4 to 5 times. About 100-120 cc. of solvent is required for each determination. Karoly Szahlander and Gyoza Sulyok. *Ber. ungar. pharm. Ges.* **13**, 185-8 (1937); (through *Chem. Abs.*).

Slash Pine Oleoresin

The oleoresin of slash pine is mostly resin acids and terpenes, but small amounts of resenes, esters, water and water-soluble substances are normal components of the original secretion. The most important bodies, delicate carbohydrate complexes including resinous acids in their structure, are present in much greater quantity than could have been derived from bark. A clear recognition of this fact on the part of the naval stores industry will undoubtedly improve the cleanliness and color of commercial rosin. It has already been demonstrated commercially that oleoresin from which part of the water-soluble content is removed by incomplete washing, produces lighter colored soaps than those obtained from the unwashed gum. Undoubtedly a thoroughly clean gum rosin is a prospect of the near future. J. Alfred Hall. *Ind. Eng. Chem.* **29**, 637-9 (1937).

Acorn Kernel Oil

Acorn kernels of India contain 16 per cent of oil which is thin and yellow and has a saponification value of 192.2, a Hanus iodine value of 81.5, and contains 18 per cent of saturated acids and 82 per cent of unsaturated acids. The saturated acids are mostly palmitic and the unsaturated mostly oleic. S. V. Puntambekar and B. S. Varma. *Indian Forester* **60**, 752-5; through *Chem. Abs.*

Shaving Cream Process

Shaving cream is prepared by heating petrolatum and water, adding ammonium hydroxide, stirring in molten stearic acid, and cooling. Small amounts of menthol and perfume may be added. Arthur D. Dexter and T. D. Traders Ltd. British Patent No. 458,601.

New Soap Making Process

Soap is made by forcing oil and alkali through separate heated conduits and through opposing or intersecting nozzles into a mixing chamber and out through some mechanism for breaking up or emulsifying the soap, e.g., through plates having orifices that progressively diminish from 1 to 0.1 mm. in a cone shape. Reginald H. A. Thomas. British Patent No. 458,782; through *Chem. Abs.*

Salts from Petroleum

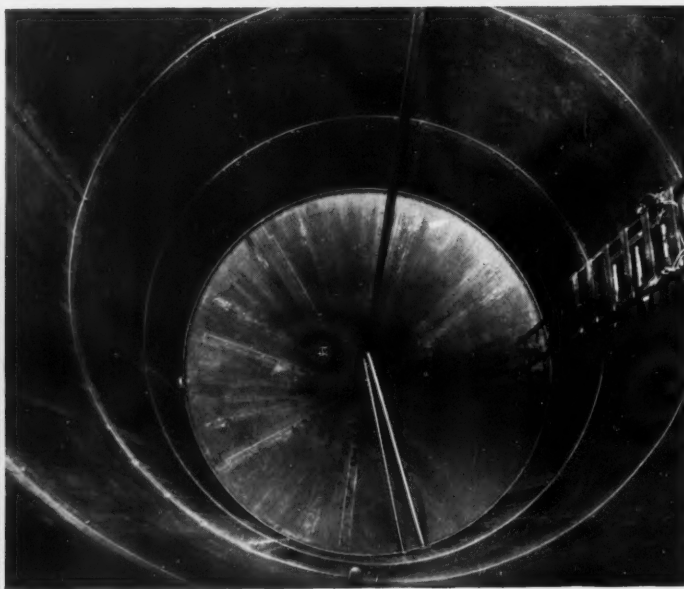
Material containing paraffin wax obtained from petroleum distillates that have been treated with solvents to reduce the aromatic constituents, is converted by heat treatment into unsaturated compounds which are then caused to react with inorganic polybasic acids containing oxygen. The resulting acid esters are neutralized with alkali-reacting agents. The resulting mixture of inorganic acid, neutral and acid esters and polymers is preferably freed from inorganic acid by treatment with a small amount of water or Glauber's salt solution, to which a little alcohol or ether may be added. The neutral esters may be extracted from solutions of the salts of the acid esters by means of solvents. The separated neutral esters may be heated with alkali to convert them into salts of acid alkyl esters. The products have wetting and emulsifying properties. N. V. Baatafsche Petroleum Maatschappij. British Patent No. 459,078.

A nonflammable fabric cleaner or spotting fluid can be made with trichloroethylene as a base, in the following way: Saponify 46 kg. of olein by heating it with 27 kg. of 25 per cent caustic soda solution. Dissolve the soap in a closed vessel (with a reflux condenser) in 45.4 liters of denatured alcohol. Pour the alcoholic soap solution with stirring into 900 kg. of trichloroethylene. The final product has a soap content of about 4.7 per cent and mixes with water to give a stable emulsion. *Seifensieder-Ztg.* **64**, 107 (1937).



OLD KETTLES, LININGS. A typical installation of steel soap boiling kettles with top sections lined with light gauge Monel sheet, to prevent rust and corrosion at the liquid-air line. One way that any plant can greatly improve existing equipment.

(below) NEW KETTLES. Top floor view of a steel soap kettle whose top section is built of Nickel-clad Steel. To resist corrosion by fatty acid, steam and fumes, the covers also are made of Nickel-clad Steel.



Which method you use depends upon the individual needs of your plant...but all prevent contamination in the kettle.

YOU always guard the purity of your fine soap when you buy your raw materials...are you sure you give it the same protection in your own processing? Here's how to make sure:

Use the same metal that the makers of your caustic soda rely on to meet your specifications of less than 25 parts iron in a million. Use Nickel or Monel, which cannot rust and bar out corrosion. Pictured here are 3 practical ways soap makers have found.

1. Build your new kettles of Nickel-clad Steel. With this permanently bonded bi-metal, the only surface that touches your

product is the 10%, 15% or 20% thickness of Pure Nickel—your guarantee of absolute purity.

2. Another method frequently used is to build steel kettles with the top sections and covers of Nickel-clad Steel. This method and the next assure freedom from corrosion at the most dangerous spot, the liquid-air line of the kettle.

3. To improve their old steel kettles, soap makers are lining the top sections with light gauge Monel.*

Both Nickel and Monel are highly resistant to caustic soda, fatty acids and salt. That's why you find them also in steam coils, swing pipes, valves and fittings.

NEW KETTLES. Interior of a Nickel-clad Steel soap boiling kettle in a prominent western plant. Piping and steam coils are Pure Nickel. Manufactured by Southwest Welding & Mfg. Co., Alhambra, California.

Write to-day, for these free bulletins: "Nickel and Monel in the Manufacture of Soap"; "Methods for the Fabrication of Nickel-Clad Steel"; "Gas Welded and Brazed Joints for High Nickel Alloys". Address:

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York, N. Y.



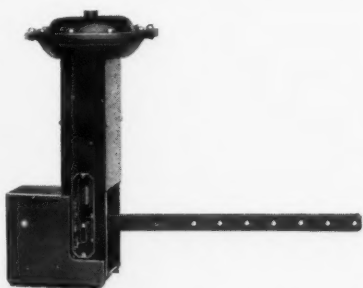
* Monel is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. This alloy is mined, smelted, refined, rolled and marketed solely by International Nickel.

New Equipment

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

360—New Lever Motor

Taylor Instrument Co., Rochester, N. Y., has recently developed an improved lever motor which is



available in three sizes—with maximum damper areas of 25, 50 and 120 sq. ft. A uniform relation is said to be obtainable in the new motor between the air pressure applied to the diaphragm motor and the resulting lever travel through its stroke. Power of either up-stroke or down-stroke can be adjusted readily. All steel, welded construction.

Publications

361—Sanitary Products

Theo. B. Robertson Products Co., Chicago, has just issued a new catalog, No. 137, listing its complete line of soaps, cleansers, disinfectants, brushes and allied sanitary supplies. Copies are available thru *Soap*.

362—Insecticidal Dusts

United Clay Mines Corp., Trenton, N. J., has just issued a new folder describing "Bancroft Clay," a diluent for agricultural insecti-

cidal dusts. Copies of the folder are available either direct or thru *Soap*.

363—New Lowell Catalog

Lowell Manufacturing Co., Chicago, manufacturer of insecticide sprayers, has just published an attractive, two-color catalog illustrating and describing the Lowell line of sprayers for insecticides, scrub soaps, etc. Copies of the catalog can be obtained by writing the company, care North Pier Terminal Bldg., Chicago, or from the publishers of *Soap*.

Prevents Yellowing in Soap

The development of a yellow surface coating in cold process soaps may be substantially inhibited by subjecting a vegetable oil of high saponification number and low iodine number to a slight degree of hydrogenation before saponifying, it is claimed by Carl H. Haurand of North Plainfield, N. J., in U. S. Patent 2,078,726 recently granted. The patent has been assigned to Best Foods, Inc., New York.

Revise Soap Specifications

The U. S. Specifications Board has just issued revised specifications for Cake Grit Soap—P S 571—and Soap Powder—P S 606. Copies of the revised specifications may be obtained at five cents each by addressing the Superintendent of Documents, U. S. Printing Office, Washington, D. C.

D-12 Reports to ASTM

The first report of committee D-12 on soaps and detergents was made before the June 30 session of the American Society for Testing Materials, held at the Waldorf-Astoria Hotel, New York. It was read by Harry P. Trevithick, chairman of the committee. The report outlined details of organization of the committee. New tentative specifications

were presented for milled toilet soap, for soda ash (anhydrous sodium carbonate) for caustic soda, for modified soda (sesquicarbonate type), and definitions of terms relating to soap. Tentative methods were also offered for the sampling and chemical analysis of soap and soap products covering the testing of cake, powdered, flake, liquid and paste soaps. The committee reported as information considerations being given to proposed methods of testing special detergents and to methods of analysis of sulfonated (sulfated) oils.

Laundry Soap Wanted

A concern in Curacao, Netherland West Indies, is interested in securing an agency for sale of blue-mottled laundry soaps, and one in San Juan, Puerto Rico, for sale of laundry and toilet soaps. Additional information may be obtained through the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., mentioning inquiries 3318 and 3327 respectively.

Toothpaste Agency Wanted

A concern in Cairo, Egypt, is interested in securing an agency for sale of toothpaste. Sellers may communicate through the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., by mentioning inquiry No. 3251.

Columbia Minneapolis Office

W. I. Gallagher, director of sales of Columbia Alkali Corp., announces the appointment of J. R. Bush as district sales manager for Minnesota and adjacent territory, with offices at 616 South Third Street, Minneapolis. Mr. Bush attended the University of Minnesota and the Minneapolis Business College. He was associated with the Minnesota Highway Department for a number of years and since that time has been with Columbia.

Move Chiris Offices

The New York offices and laboratories of Antoine Chiris Co. were moved June 28 to new quarters at 115 East 23rd St.

SOAP AND SANITARY PRODUCTS BOOKS FOR YOUR LIBRARY

Modern Soap Making, by Dr. E. G. Thomssen and C. R. Kemp. The first entirely original American book on soap manufacture in several years. Thoroughly covers every phase of soap manufacture and glycerin recovery. Written by practical soap men . . . a truly practical book. Chapter headings: Raw Materials; Machinery and Equipment; Soap Making Methods; Soap Products; Glycerin Recovery and Refining; Analytical Methods; Appendix with reference tables, etc. 540 pages. \$7.50 per copy in U. S. Add 50 cents for foreign postage.

Henley's Twentieth Century Book of Recipes, Formulas and Processes. A handy reference book listing 10,000 miscellaneous formulas, including special sections for soaps, polishes, insecticides, etc. 800 pages. \$4.00.

The Industrial Chemistry of Fats and Waxes, by Hilditch. A study of the fats and waxes in relation to their use in industry. 450 pages. \$7.50.

Hydrogenation of Organic Substances, by Ellis. Latest revised edition of this well-known book, pre-eminent in the field of hydrogenation. 990 pages. \$15.00.

Modern Soap Perfumes, by Sedgwick. A practical handbook on the science of soap perfumery. \$1.00.

Pyrethrum Flowers, by Gnadinger. A complete compilation of all known facts on pyrethrum, its history, sources, evaluation, chemistry and uses. The problems involved in the manufacture of pyrethrum products are given thorough and lucid exposition. 396 pages. \$5.00.

Truth About Cosmetics, by McDonough. The answer to the avalanche of "smear" criticism. Chapter on soap and bath preparations. 320 pages, \$5.00.

"Soap". Bound volumes for years 1927-28, 1935 and 1936 available at \$12.00 each.

Soaps and Proteins, Their Colloid Chemistry in Theory and Practice, by Fischer. 272 pages. \$4.00.

Soap Blue Book, A Buyer's Guide, Catalog and Business and Technical Reference Book. 195 pages. \$1.00.

Spray Process for Soap Powders, by Thomas. Full discussion of latest manufacturing processes. 72 pages, in German. \$1.50.

Vegetable Fats and Oils, by George S. Jamieson. 444 pages. An American Chemical Society Monograph. Covering classification, occurrence, properties, analytical methods, etc., of vegetable oils, fatty acid and other derivatives; also production and refining methods. \$6.50.

Chemistry of Laundry Materials, by D. N. Jackman. A new book for the laundry operator, containing valuable information on the chemistry of laundry materials. Discusses alkalies, soaps, bleaches, starches, also the newer detergents, synthetic soaps, etc. 230 pages. \$2.50.

Laundry Chemistry, by Harvey. A practical book dealing with basic principles of laundry chemistry. Of use to suppliers of laundry materials as well as laundry operators. \$1.75.

Who's Who in the Chemical Industry, by Haynes. Biographies of 5,686 men in the chemical field cross-indexed geographically and by companies. Gives past records, company connections, hobbies, interests, accomplishments, etc. \$6.00.

Our Enemy—The Termite, by Snyder. The termite is treated from the economic as well as the entomological point of view in this book based on the author's 26 years of study of termites and methods for their control. Practical control methods and termite proof construction are discussed in detail. 196 pages, \$3.00.

Owing to the large number of books supplied it is impossible to open accounts on individual book orders or to supply books on approval. Please send check with order.

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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,079,793, Detergent Composition, Patented May 11, 1937 by Theodore R. Donlan, Irvington, N. J., assignor to Stanco Inc. A non-corrosive detergent composition comprising about 20-50 per cent of isopropyl alcohol, about 0.1 per cent of an oil-soluble sulfonate derived from petroleum oil and about 50-80 per cent of water, with such small amounts of minor ingredients as dyes, perfumes, and the like as may be desired.

No. 2,080,770, Toxic Agents, Patented May 18, 1937 by Stefan Goldschmidt, Karlsruhe, and Karl Martin, Bruchsal, Germany, assignors to Kessler Chemical Corp., New York. As an insecticide a preparation comprising as an active constituent an aromatic isothiocyanate in which the isothiocyanate radical is directly attached to an aromatic nucleus.

No. 2,081,073, Polish, Patented May 18, 1937 by Leroy W. Shuger, Baltimore, assignor to Baltimore Paint & Color Works, Inc., Baltimore. A free-flowing emulsion liquid polish combining the ingredients listed below in approximately the following parts by weight:

	Parts
Mineral spirits	169
Light mineral oil	187.5
Natural castor oil	93.6
Ricinoleic acid	11.03
Water	624.75
Water solution of potassium hydroxide containing 1.65 parts of potassium hydroxide	19.25
"Lanette Wax"	30

No. 2,081,117, Antisunburn Preparations, Patented May 18, 1937 by Robert A. Hall, Brooklyn, assignor to Colgate-Palmolive-Peet Co., Jersey City. An anti-sunburn preparation containing a substantial amount, effective to prevent sunburn, of an ester of salicylic acid with a polyhydric alcohol.

No. 2,081,327, Process for Bleaching, Patented May 25, 1937 by Ehrhart Franz, Leipzig, Germany. In a chlorine-free bleaching process, the step of acid bleaching in a hydrogen peroxide solution rendered acid by an addition selected from the group consisting of sulfuric acid in combination with an alkaline sulfate, boric acid, phosphoric acid, and the organic acids.

No. 2,081,617, Process for Improving Liquid Potassium Soaps, Patented May 25, 1937 by Fritz Draisbach, Ludwigshafen-on-the-Rhine, Germany, assignor to Hall Laboratories, Inc., Pittsburgh. A process for improving liquid potassium soaps, which consists in adding to the soap a mixture of potassium and sodium metaphosphates in which the molecular proportion of potassium metaphosphate to sodium metaphosphate exceeds 1:1.

Primitive Soap Making

Ancient soap making methods used by primitive man are shown in a new exhibit recently opened to

the public in the Knox Hall of Civilization at the Buffalo Museum of Science at Buffalo, N. Y. Miniature wax models show the ancient soap making operations as visualized by the museum's staff on the basis of their research work. Of the figures shown, one is slicing fats and grease from meat. The second is mixing these fats with wood ashes which served as the saponifying agent. The third figure is using the soap for the family laundering in a large earthen kettle. The opinion is ventured that the alkalinity of the finished soap might have been a trifle high, but more than likely, it was the other way,—the free fat was probably anything up to ten per cent, and rancidity was undoubtedly considered a virtue. But, the women of those days were not particularly concerned with "dish-pan hands."

H. C. Harding Moves

H. C. Harding, Inc., Philadelphia, manufacturer of textile oil specialties, moved July 1 to new offices at 2nd and Tilghman Streets, Philadelphia.

Cotton Oil Stocks

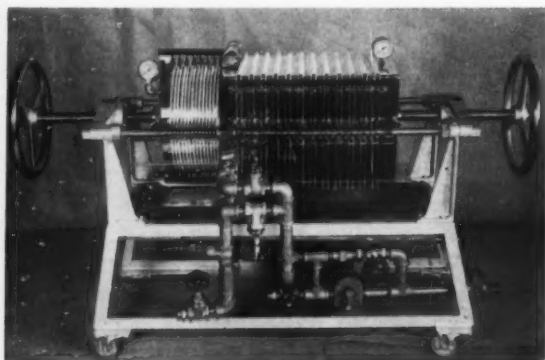
Stocks of crude cottonseed oil on hand in United States as of May 31, 1937, totaled 49,139,223 lbs., as compared with 62,698,301 lbs. on the same date in the previous year.



Soap making exhibit at Buffalo Museum of Science.

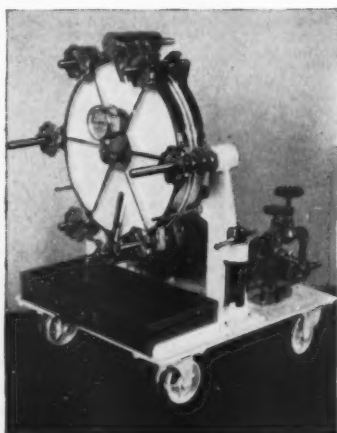
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• **Three-Way Multiple Filter**

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• **Bench Model**

This bench model filter is the machine for smaller plants and for jobs which do not require a large output—although it handles up to two gallons per minute. Complete with pump, motor and two asbestos filter sheets. Additional disks can be added if necessary.

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Laundry Bleach

(From Page 27)

light protective coating over the fibers.

That bleach serves a useful purpose is beyond question. That its tendering action may be kept negligible is also true. Samples were put through a good standard wash formula 20 times and then tested for whiteness and loss in tensile strength. These samples after twenty washings showed 99 per cent whiteness and a loss of 8 per cent in tensile strength, a loss not much greater than that due to mechanical wear produced by the same number of washings.

BOTTLED bleach for household use is not as strong as that for the power laundry. The reason for this is that you cannot tell anything about the type of person that is going to handle this kind of bleach or how it will be used. Also the Federal Caustic Poisons Act requires that products containing the equivalent of 10 per cent of free chlorine or 10 per cent of caustic soda must be labeled poison and carry the antidote on the bottle. There is no question but what a bleach containing 10 per cent of available chlorine and 10 per cent of caustic soda is a dangerous chemical if it is not handled properly. Instead of being made with caustic, bleach for domestic use is sometimes made with a combination of caustic soda and soda ash. The method of preparation is the same. Chlorine gas is passed into the solution of caustic, or caustic and soda, until the content of available chlorine is about 5 per cent. About 1 per cent excess of soda ash may be present, or 0.2-0.3 per cent of free caustic.

One well known commercial domestic bleach states on the label that it contains 5.25 per cent of sodium hypochlorite by weight. This corresponds to about 5.5 per cent of available chlorine as determined by the titration method described above.

No doubt there are numerous departures from this basic formula. For example, French Patent No. 754,112 (1933), states that bleaching

salts are made by passing chlorine into a solution containing a uni-, bi- or tri-basic alkali salt of phosphoric acid and caustic alkali. The products are of the type $\text{PO}_4\text{Na}(\text{ClONa})_2$ and $\text{PO}_4\text{Na}_2(\text{ClONa})$. Such bleaches are used by housewives in their home laundries, but probably have a greater use as a stain remover and as a disinfectant.

Chlorine bleach is a fairly strong disinfectant and may be used for this purpose in cleaning toilets, garbage cans, etc. When it is used as a disinfectant, it is important that the surface to be disinfected be thoroughly cleaned first. This is to remove soil which otherwise would decompose the bleach before it had a chance to attack bacteria and similar microorganisms. Most types of organic soil and many types of inorganic soil have a decomposing effect on the bleach. Bleach is used in a diluted form as a preventive and in the treatment of ringworm and athlete's foot.

There is no quantitative expression for the disinfectant power of chlorine bleach. Phenol coefficient, for example, can be applied only to phenols, their derivatives and chemically related compounds. It cannot be applied to other forms of disinfectants such as chemically unrelated substances like mercury compounds, iodine or hypochlorite.

The question of permissible and forbidden claims which may be made in connection with the advertising of hypochlorite bleach as a disinfectant, deodorant, stain remover, etc. is one which will require separate treatment and will be discussed in a subsequent paper.

Jabon Cochi

(From Page 33)

soap" on account of its dirty appearance and odor. However, progress is being made in replacing this jabon cochi with real soap which is properly manufactured. The firm of Kong Hermanos in Guatemala City has installed modern methods and chemical control in its plant, and makes a soap called "Zinnia" from edible tallow, palm and coconut oils, and a small

percentage of rosin. It is a very fine quality soap and compares altogether favorably with the best American laundry soaps. This soap does not sell well in the form of bars, but in ball form, it sells like hot cakes. This is difficult to understand because if there is anything just about as elusive as a live eel, it is a ball of wet soap.

All soap making raw materials are expensive in Guatemala. This, of course, tempts factories to use fillers. The Kong people, however, have resisted this temptation and use no fillers. Three soap plants have small chemical laboratories for testing of raw materials and also for control of processes. They need these laboratories to check some of their materials, judging from what is shipped to them at times. One lot of supposed first grade tallow received not so long ago from San Francisco contained 7.6 per cent of water, gelatinous material and plain dirt. It is no wonder that they prefer to buy tallow in Australia.

There is another interesting point about soap making in Guatemala. As far as can be determined, there is probably not a single soap frame to be found in Guatemala. Finished settled soap is run by gravity out onto a polished cement floor to cool. It is then marked off with a straight edge and cut by a knife formed like the cutter of a plough. As many as five men are required to operate this knife, one to guide the knife and four to pull the chain attached to the cutter,—certainly a primitive way to cut soap in these days of automatic machinery.

After experiences in operating soap factories and edible oil refining plants in ten foreign countries, I am full of admiration and respect for the people of Guatemala, its government, and the fine character at the head of the government, Don Jorge Ubico, president of the republic. Much progress is being made there in manufacturing, and more is going to be made in the near future, and especially in soap manufacture. Replacing primitive and antiquated methods by modern processes has begun and will continue.

Mrs. Smith Knows Nothing . . .

about Peet-Grady tests, and probably thinks pyrethrum is a disease.

BUT—she knows what she wants, and it's good business for you to see that she gets it.

When she buys liquid insecticides, 1937 model, Mrs. Smith demands, along with supreme killing power:

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SOME insecticide concerns have the mistaken idea that they can handle all their sales chances with one star product. They recommend their single type of insecticide for every possible purpose, trying to make it cover all the ground from shortstop to right field.

We have always believed this policy a mistake in insecticide selling, as well as in baseball. It is our thought that better results are obtained at lower costs by offering products specifically designed to accomplish certain definite effects. We have a star pitcher on our team, of course, but we've got the fielders as well. Meet the boys who hold down the territory in left, center and right.

● **Pretox Stock Spray Concentrate No. 20—**

Safe, effective and enduring repellency combined with quick knockdown and good killing value.

● **Pretox Bedbug Concentrate—**

Immediate leg paralysis and high toxicity. Especially adapted for control of crawling insects.

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Prices quoted with or without color.



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"It's the Odor that Sells the Product"

Here is an easy way to test Improved Pyrocide 20

**ACCEPT TRIAL ORDER
AT DRUM PRICE!**

LEARN...



... How to cut perfume costs a third to a half. Because the odor of Improved Pyrocide 20 has been greatly reduced, finished sprays require $\frac{1}{2}$ to $\frac{1}{3}$ less perfume, thus reducing manufacturing costs.



... How to make a spray having brilliant clarity. You can add the extra selling appeal of brilliant clarity by using Improved Pyrocide 20. It will dilute clearly with any deodorized base oil.



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Gentlemen:

Please send 5 gallons of Improved Pyrocide 20 at the drum price per gallon. I want to test it in my household insecticides while the insect season is at its height.

Firm name.....

Address.....

City.....

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CLIP AND MAIL TODAY!



NOW—before you contract for next season's pyrethrum concentrate—is the time to learn what Improved Pyrocide 20 will do to help you produce better household insecticides without additional cost to you.

We can tell you what Improved Pyrocide 20 is doing for other manufacturers . . . how it is making finished sprays of brilliant clarity that will not stain and will not taint the flavor of food. We can point to its high killing power resulting from a guaranteed pyrethrin content of 2.4 per cent, equivalent to 2 grams per 100 c.c. We can show how its greatly reduced odor saves $\frac{1}{2}$ to $\frac{1}{3}$ of your present perfume costs.

But you'll learn more—much, much more—by using Improved Pyrocide 20 in your finished product and testing it *now* while insects are plentiful. So take advantage of this offer before you contract for next season's requirements. Send the coupon today for your trial order.

Improved PYROCIDE 20

THE ORIGINAL STANDARDIZED PYRETHRUM CONCENTRATE

Paratints

DO **2** JOBS FOR

THE PRICE OF **1**

Usually, in the making of para blocks, bath salts and moth balls, coloring and scenting are two separate jobs.

But not for manufacturers who use PARATINTS.

PARATINTS do both in the same operation. Moreover, they give more uniform results . . . for they penetrate the crystals more evenly and effectively. Their odor and color last until the final crystal has evaporated.

Use PARATINTS and forget your coloring and scenting troubles. They are available in six popular colors from cerise to violet, matched with floral scents that replace the odor of paradichlorobenzene.

Series A \$2.00 a pound
for use where cost is an important consideration

Series B \$4.50 a pound
for use where the highest perfume value is a necessity

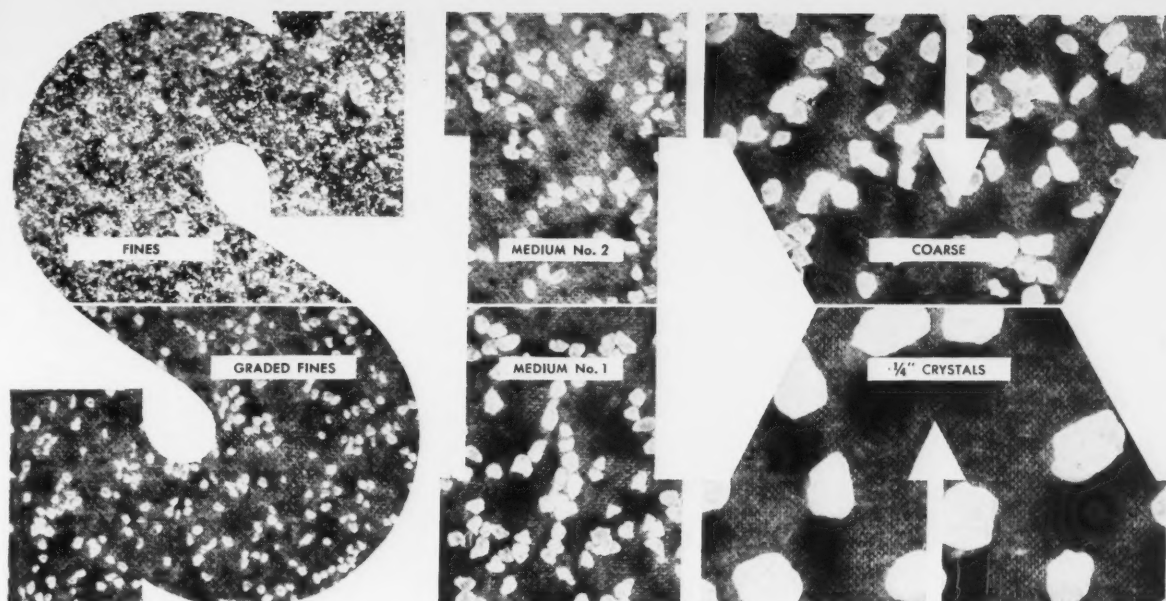
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OF ONE

AND THAT ONE IS

*** PARADOW**

(PURE PARADICHLORBENZENE)

The popularity of PARADOW with deodorant and moth preventative manufacturers is due to several sound reasons. First, of course, is the always to be depended upon quality. PARADOW is noted for its purity—its full strength—and consistent uniformity.

But, beyond these points, PARADOW has found strong favor because Dow has made earnest effort to supply a range of sizes meeting virtually every manufacturing requirement. PARADOW is available in six grades—from fines to 1/4-inch crystals. In addition, special sizes to suit individual requirements may be secured on special order.

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Dichloride — Orthodichlorobenzene and over 300 others.



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THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

Branch Sales Offices: 30 Rockefeller Plaza, New York City—Second and Madison Streets, St. Louis—135 South La Salle Street, Chicago

July, 1937

Say you saw it in SOAP!

81

INSECTICIDES

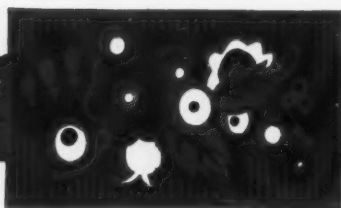
Out of the awkward stage, into the prime of a vigorous life—that's the insecticide business today. Those of us who watched it toddle, are today helping it stride to greater successes.

They Sell, Stay Sold and Repeat

It is no secret that advertising has helped, but billboards and magazines won't make Mrs. Housewife buy a second can of any spray that doesn't kill well and doesn't smell agreeable. Those are two attributes that are indispensable to repeat sales.

Kill Must Be Right

The most important thing a fly spray has to do is to *kill flies*. How the industry has progressed in that department! Today it is possible to produce a spray with a killing power measured scientifically in advance. Gone are the doubts; the kill is always right.



van Ameringen-H

Manufacturers and Importers of Aromatic Essentials

AROMATIC CHEMICALS—ESSENTIAL OILS—FLAVORS—PERFUME SPECIALTIES—

S

COME OF AGE

Odor Must Be Right

What housewife wants to live in an atmosphere of kerosene? Fortunately that's no longer necessary. Makers of perfume material have not been idle. They have learned to mask unpleasant odors and to impart pleasant odors to insecticides. Today you have only to name your choice and you are sure of fly spray that smells right.

We were among the first makers of perfume materials to cooperate with the insecticide industry. We have worked out ways of covering solvent smells *without interfering with killing power*. You can draw on this long experience.

We'll Give Your Spray a Good Odor

Send us a gallon of your *unperfumed* spray. We'll deodorize or perfume it in several ways, and let you make your choice. We'll keep within your cost limits, and we'll promise you a better smelling, better selling spray than you ever had before.

n-Haebler, Inc.

315 FOURTH AVENUE, NEW YORK

S—Chicago

Toronto

Los Angeles

FACTORY, ELIZABETH, N. J.

July, 1937

Say you saw it in SOAP!

83



***EFFICIENCY · UNIFORMITY
STABILITY · ECONOMY***

LETHANE 384, the synthetic insecticide concentrate, has established itself through successful use in hundreds of products during the past several years. This has been possible through its high efficiency against a wide range of insects, its uniformity and stability and its economy. We urge, therefore, that you test this concentrate as the active ingredient in your insecticides. The use of Lethane 384 will improve your product.



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in

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WATER SOLUBLE PERFUME OILS



Manufacturers of Shampoos, Liquid Soaps, Theater Sprays, Deodorant Sprays, Formaldehyde preparations and many others recognize the advantages of water-soluble perfume oils that are...**COMPLETELY** soluble... and leave no trace of oil film or cloudiness. **AQUAROMES** meet these rigid requirements

more effectively and economically than the usual water-soluble perfume oils, and enable the production of products that enjoy maximum consumer appeal. Available in a large selection of popular scents. Write for Testing Samples Now!

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Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS
Executive Offices and Factory: 603 JOHNSON AVE., BROOKLYN, N. Y.

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New Orleans, La.
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San Francisco, Calif.
512 Washington St.

Los Angeles, Calif.
515 So. Fairfax Av.

The Case of the SEVEN MURDERED MEN

Another Baffling
PHILO ANTS Mystery

THE telephone bell rang steadily. Philo Ants, the famous detective, stirred himself from his comfortable seat.

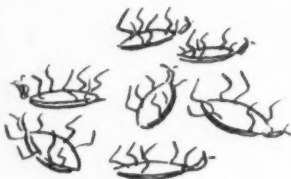
"Hello", he said.

"Hello, Philo?"

"Yes, who's this?"

"This is Inspector Fly. Philo, there's been a terrible crime committed. Seven men including Judge Cal V. Roach, have been found murdered. We need your help."

"Wait for me—I'll be right up."



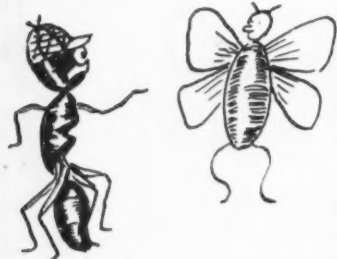
"It's obvious," said Philo, "that they are all dead."

"Yes," nodded Inspector Fly, "they have been murdered."

"Got any witnesses?"

"Yes,—Johnny Bedbug, the racketeer, Murray Mosquito, his side kick, and Lizzy Flea, who says she was passing by when she saw the men collapse."

"All right," said Philo, "I'll talk to Lizzy first. Now, Lizzy, control yourself. Tell me exactly what happened."



"Well, Mr. Ants," said Lizzy, "I was walking down to meet my boyfriend last night and I saw this crowd of roaches. I crossed the street and went right on my

way, but when I was about 100 feet away from them, I saw a heavy fog descend, and then first thing I knew they had all fallen down. I didn't know what to do or say so I just kept still. But

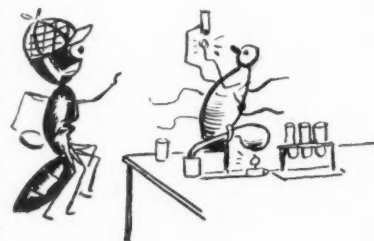
this morning when I found out what happened I came to Inspector Fly right away and here I am."

"Aha," said Philo, "a clue at last. Thank you Lizzy." Philo whipped his magnifying glass out of his pocket and stooped down close to the dead bodies. He spotted several drops of a liquid.

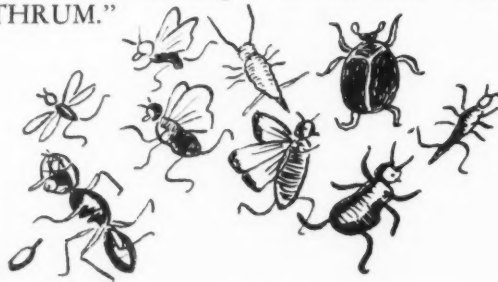
"Aha," he said and he turned to Inspector Fly. "Get Chief Chemist Alex Spider over here immediately—and tell him to bring his gas mask."

"Yes," said Chief Chemist Spider to Philo, "I think your suspicions are correct. I detect traces of DI-BUG PYRETHRUM."

"Just as I suspected," said Philo. "It's another case of DI-BUG PYRETHRUM poisoning. This has got to stop — DI-



BUG is killing all our best citizens. It's too bad, but we'll all have to run away. Inspector Fly! sound the warning — it's DI-BUG PYRETHRUM."



PHILO ANTS is a super detective. It is quite proper that he should know the effects of DI-BUG PYRETHRUM EXTRACTS. However, it takes no super detective to know that DI-BUG PYRETHRUM EXTRACTS have killing power that never fails.

DI-BUG PYRETHRUM EXTRACTS, made with SPRAYSENE, Sherwood's scientific insecticide base, are guaranteed free from kerosene odor and chemical solvent smells.

DI-BUG PYRETHRUM POWDER is the finest Japanese Impalpable Insect Powder. Other DI-BUG products are: Powdered Derris Root, Cube Root and Rotenone C. P.

DI-BUG PYRETHRUM PRODUCTS are tested chemically and biologically before and after manufacture.

Write today for further information.

SHERWOOD PETROLEUM COMPANY, INC.

Main Office: BUSH TERMINAL, BROOKLYN, NEW YORK

Stocks carried in principal cities.



INSECTICIDES

Sell more readily when the objectionable odors
are properly masked.

"D & O" PETRODORS

pleasantly modify the odors of insecticides,
leaving no stain.

Offered in various types from 50 cents per
pound up.

Write us for samples and full directions.

For PARADICHLORBENZENE

we offer an extensive assortment of strong, last-
ing odors at low prices.

We are headquarters for

OIL CAMPHOR SASSAFRASSY
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INSECTICIDES

PES-TOX

The PES-TOX insecticide of our manufacture is prepared expressly for the killing of insects which infest the home. It is a liquid product of light-lemon color and the ingredients are 100% active. Entomological tests by nationally recognized laboratories, using the Peet-Grady chamber method, show PES-TOX to have a knock-down value of 97% in ten minutes and a kill of 70% in 24 hours.

CERTIFIED PYRETHRUM CONCENTRATE No. 124

One gallon mixed with twenty-four gallons of suitable oil base results in twenty-five gallons of crystal clear fly spray—with the maximum of killing power.

STABLE — UNIFORM
POWERFUL

Write for sample and Low Price.

STAINLESS CATTLE SPRAY

Ingredients are 100% Active

Stainless Cattle Spray is a standardized product, uniform at all times. Packed in one-gallon cans, six per fibre carton, and in five-, ten-, thirty- and fifty-gallon drums.

Samples will be cheerfully submitted upon request.

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SANITARY PRODUCTS



A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

WITHIN the course of the next few months, the official specifications for disinfectants and for household liquid insecticide of the National Association of Insecticide & Disinfectant Manufacturers will be printed for distribution throughout the nation to public buying agencies and purchasing agents wherever they can be found. Nothing except the specifications will be printed,—no comments on compositions, use, or anything else about the products themselves. In view of wide controversy on how, when, and where to use these products, and also which product to use, the specifications will be published without comment. At least, they will be made readily available for those purchasing agencies who honestly desire to be guided in their buying of insecticides and disinfectants. These specifications can,—if buyers will take the trouble,—form the basis for far more intelligent buying of these products than has generally been the case heretofore.



THE National Association of Exterminators and Fumigators is currently conducting a mail ballot on a proposal to change its name to the National Pest Control Association. The suggested new name is a decided improvement. Not only is it more accurately descriptive of the proper function of the industry, but its adoption might do much to awaken the general public to the higher business and ethical standards that have characterized the industry over the past few years. By frankly admitting that its province is to "control," rather than to "exter-

minate," the industry puts itself in the position of abandoning those reckless claims that have in the past brought it upon occasion into disrepute. The move toward a more dignified and simplified characterization of the industry is definitely a step in the right direction.



THUS far, we hear, the 1937 household insecticide season is considerably ahead of previous years. Demand for insecticide raw materials during the spring was exceptionally active, with shipments taxing the capacity of suppliers. Call for shipment of finished insecticides came earlier and in greater volume this year, due chiefly, it is said, to the generally mild winter and to a wet spring, which brought an early and profuse insect development. Given normal weather conditions for the balance of the summer, there is every likelihood that 1937 may be one of the best, if not the best insecticide year which the industry has experienced. All of which brings to mind that a year of heavy insect infestation is the most opportune time to begin educating the public on the subject of insecticides. Every insect is an advertisement for a good insecticide,—a ready-made advertisement of which the industry should certainly take greater advantage.



SEVERAL important papers presented before the recent insecticide and disinfectant meeting in Chicago which do not appear in this issue, will be published next month.



HARRY W. COLE

1882-1937

HARRY COLE died June 15 at the University Hospital, Augusta, Georgia, following an illness of more than a year. At the time of his death, he was on a year's leave of absence from his duties as vice-president of Baird & McGuire, Inc., Holbrook, Mass., with which company he had been associated since 1922. For thirty years, he had been an outstanding figure in the American disinfectant industry,—one of the founders of its trade association in 1914, three times president of the Association, and for eleven years its secretary, serving all-told over twenty years in the active direction of the affairs of the Association.

Harry Walter Cole was born in Frederick, Maryland, in 1882, and was only fifty-five years old at the time of his death. His father was Lamartine W. Cole and his mother, Ida Jenkins. He attended Georgetown University, graduating in chemistry. In 1903, he entered the disinfectant business with the Kretol Company, Washington, D. C., later becoming vice-president of that firm. In the same year, he married Ada C. White. In 1913, he went with the

Philadelphia branch of the Barrett Company (then the Barrett Manufacturing Co.) in charge of disinfectant sales, becoming head of the disinfectant division of the firm in 1915. In 1922, he left Barrett to become vice-president of Baird & McGuire, Inc., with firm he had been associated since.

Harry Cole was president of the National Association of Insecticide & Disinfectant Manufacturers from 1918 to 1920, and from 1922 through 1933, its secretary. He was a recognized authority on disinfectants and the disinfectant industry, and the laws which govern this industry. He had been active in Masonic affairs for some years, and was buried June 20 at Quincy, Mass. with Masonic rites. He is survived by a daughter, and a son, Allan W. Cole.

With the passing of Harry Cole, the disinfectant industry has lost a man who has probably done more for the industry, and to raise the level of its ethics, than any other person in its history. With his death, the industry, and every man in the industry, has lost a true friend.



New Disinfectant Specifications

Adopted at Insecticide & Disinfectant Assn. Meeting, Chicago. June 7-8—Not fully approved as yet—Committee confers with Bureau Animal Industry—To re-write Peet-Grady Test—Establish Insecticide Fellowship at Ohio State—Attendance 250—Furst is golf winner

THE adoption of a complete new set of specifications for disinfectants, the appropriation of funds to print and distribute the association's official specifications both for insecticides and disinfectants, a decision to re-write and standardize the Peet-Grady Test for insecticides, and the announcement of establishment of a NAIDM fellowship at Ohio State University were some of the high points at the 24th annual mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers, held at the Edgewater Beach Hotel, Chicago, June 7 and 8. Attendance levels reached a new high point, with some two hundred and fifty on hand at the various meeting sessions.

The decision to instruct the Insecticide Testing Committee to re-write the Peet-Grady testing procedure was made in the light of a number of recent valuable suggestions for improvement in the official technique. The revised official procedure will be published in an early issue of SOAP in approved form. One of the principal changes is the specification of use of paper on the floor of the testing chamber.

The movement toward standard specifications for products of the industry received additional forward impetus at the mid-year meeting with the adoption of a complete new set of specifications for disinfectants. At the same time it was voted to appropriate association funds to have the new disinfectant specifications, when all wrinkles have been ironed out, and the official insecticide specifications as well, printed in booklet form.

These will then be available for use by association members in promotional and educational work. It is hoped that their use can be made standard among purchasing agents throughout the country.

The new disinfectant specifications, as presented by the disinfectant specifications and standardization committee, headed by J. L. Brenn, president of the Huntington Laboratories, were subject to considerable change on the meeting floor. The following revised draft has been drawn up, incorporating the suggested changes. These revised specifications have been mailed to members of the committee for their final action, and will not become official until they have been accepted in the amended form. It is also reported that conferences of the committee are being held with the Bureau of Animal Industry, Washington, to avoid any specification conflicts. If further changes are found necessary, the specifications will be republished in final form in a later issue of SOAP. In their present tentative form, they read as follows:

Standard Specifications for Cresylic Disinfectants

1. The product shall be made from that portion of coal tar known as "tar acids" and a soap derived from a fat or oil of vegetable origin.
2. It shall contain not less than 50 per cent of tar acids, as determined by the method described in USP XI for the assay of cresol in the Saponated Solution of Cresol.

3. It shall contain not more than 25 per cent inert ingredients (water plus glycerine, if any).
4. The phenol coefficient shall be determined by the F.D.A. method using *B. typhosus* as the test-organism and shall be clearly stated on the label attached to each shipping container.
5. It shall contain less than 5 per cent of benzo-phenol.
6. It shall make clear solutions with water of zero hardness at 20° C. (68° F.) within the concentration range of from 1 to 5 per cent. Such solutions, when kept in closed containers, shall remain either practically clear or become only slightly opalescent when allowed to stand for 24 hours at 20° C. (68° F.) away from direct light.
7. It shall show no soap separation when cooled down to 0° C. and held at this temperature for 3 hours.

Standard Specifications for Emulsifying Type Coal Tar Disinfectant

1. It shall contain not less than 65 per cent by weight of oils and acids from coal tar.
2. It shall contain not over 10 per cent water.
3. It shall not contain kerosene or other petroleum distillates.
4. The phenol coefficient shall be determined by the F.D.A. Method of test against *B. Typhosus* and shall be clearly stated on the label attached to each shipping container.
5. It shall make milky emulsions with water of zero hardness at 20° C. (68° F.) when diluted in the ratio of 5 parts disinfectant with 95 parts of water for disinfectants of coefficient 10 or un-

der; and in the ratio of 2 parts of disinfectant to 98 parts of water for disinfectants over 10 in coefficient; these emulsions shall show not more than a trace of oily float or sediment when stored for 5 hours at room temperature.

6. It shall remain limpid, showing no sign of naphthalene crystallization down to 0° C. in 12 hours.
7. It shall contain less than 5% benzo-phenol.
8. The disinfectant shall stand indefinitely, showing no separation, no loss of germicidal value, or any form of decomposition (such as soap separating from the oil) under normal and reasonable conditions of storage.

Standard Specifications for Pine Oil Disinfectant

1. The product shall be manufactured from pure steam distilled pine oil and emulsifying agent and remain clear and homogeneous under normal and reasonable conditions of storage.
2. It shall contain not less than 60 per cent by weight of steam distilled pine oil.
3. It shall contain not more than 10 per cent water, inert matter.
4. The phenol coefficient shall be determined by the F.D.A. Method of Test against *B. typhosus* and be clearly stated on the label attached to each shipping container.
5. It shall not contain kerosene or other petroleum distillates.
6. The product shall make a stable emulsion in water of zero hardness at 20° C. (68° F.) when diluted at the rate of 5 per cent. The emulsion shall stand for at least twenty-four hours showing no sign of oil float (unsaponified or clear free oil).

Standard Specifications for Liquid Hypochlorites Disinfectant, Deodorant and Germicide

Classification

Liquid hypochlorites are divided into three classes: (one), sodium

hypochlorite alkaline with sodium hydrate, sodium carbonate or the other alkaline salts; (two), hypochlorites which are essentially sodium hypochlorites and alkaline with calcium hydrate; and (three), calcium hypochlorite solutions alkaline with calcium hydrate. A delivery of any one of these classifications shall be satisfactory unless otherwise specified.

Physical Requirements

The hypochlorite solution shall be a homogeneous liquid. It shall be miscible with water of zero hardness at 20° C. (68° F.) in all proportions. It shall be ready for dilution when delivered.

Chemical Requirements

The available chlorine content which shall not be less than 2.5 per cent by weight shall be clearly stated on the label. Its rate of deterioration shall not be more than 10 per cent of its original available chlorine content when stored in the original container for six months in a cool, dark place at maximum temperature of 68° F. (20° C.).

Identification

Each container shall be marked with the name of the material, the brand (if any) of the material, the name of the manufacturer, net contents therein, and date of manufacture.

Packing

The hypochlorite shall be delivered in standard, commercial containers of the size as called for in the schedule. Each container holding one gallon or more shall be stoppered with a closure having vent.

OTHER important developments at the meeting included adoption of a resolution to wire the Governor of California, requesting that he veto California Assembly Bill No. 1253, because of the desirability of awaiting adoption of the Federal Food and Drugs Act. It was also voted to hold the annual meeting in New York City,—the time and place to be selected by the fol-

lowing committee: John Powell, chairman; John H. Wright, Ira P. MacNair and A. L. van Ameringen.

A change in the constitution was adopted, giving the committee a certain amount of leeway in fixing the meeting date. It is now provided that the annual meeting be held during November or December, and the summer meeting during May or June, at the call of the board of governors.

Announcement was made by Melvin Fuld of Fuld Bros., that plans had been formulated for a conference in Washington, June 23, at which members of the industry were to meet with officials of the U. S. Public Health Service in an attempt to gain the closer coöperation of that group in advising the public as to the efficacy of disinfectants in flood stricken areas. The committee which made the trip to Washington included the following: Melvin Fuld, Fuld Bros., Baltimore; Dr. E. G. Klarmann, Lehn & Fink, Inc., Bloomfield, N. J.; C. L. Weirich, C. B. Dolge Co., Westport, Conn.; Campbell Baird, Baird & McGuire, Inc., Holbrook, Mass.; W. A. Hatfield, General Laboratories, Philadelphia.

The new association fellowship, set up at Ohio State University, will be under the direction of Dr. F. L. Campbell, formerly of the U. S. Dept. of Agriculture and now connected with the University. The first fellow is E. N. Woodbury who will carry forward the work already started in the investigation of methods for testing liquid insecticides against crawling insects. A fund of \$1,200 has been set aside out of the association treasury to defray the cost of carrying the fellowship for the first year.

Another new activity of the association, proposed at the meeting and accepted by the membership, was to set up a speakers' bureau to provide competent speakers qualified to appear before civic groups. It was planned that they should coöperate with the publicity committee in the general dissemination of advice as to the need for and the use of products of the industry, as well as to clear up much of the confusion which at pres-

ent exists in the public mind about the insecticide and disinfectant industry and its products.

In reporting for the membership committee, A. L. van Ameringen advised that six new members had been added to the association so far this year, these being: *Active*—Pennsylvania Refining Co., Butler, Pa.; Thorocide Chemical Co., St. Louis; R. E. Tongue Bros. Co., Philadelphia; *Associate*—Dodge & Olcott Co., New York; Upressit Products Corp., New York; Williams Sealing Corp., Decatur, Ill.

THE following resolutions were reported by the resolutions committee at the close of the meeting, this group consisting of Peter Dougan, chairman, Gordon Baird, Henry Nelson, John Curlett and R. O. Cowin:

(1) WHEREAS it has been recommended by the Legislative Committee that the Association in convention wire the Governor of California requesting that he veto California Assembly Bill No. 253 because of the objections stated in the Association's wire of May 27th and further because of the desirability of awaiting the new Federal Foods and Drugs Act, BE IT RESOLVED THAT this Association send such a wire to the Governor of California.

(2) BE IT RESOLVED THAT a copy of the standard specifications on disinfectants by the National Association of Insecticide and Disinfectant Manufacturers at the convention held June 7, 1937, be prepared and sent to all members of the Association AND BE IT FURTHER RESOLVED THAT a copy of the standard specifications be sent to the U. S. Bureau of Standards for their consideration and adoption as standards for the industry.

(3) BE IT RESOLVED THAT the Secretary of this Association use these standard specifications in making answer to purchasers, or purchasing agents, who inquire for information.

(4) BE IT RESOLVED THAT this Association through its Officers thank

all those who have added to our information by the papers which they have read to us.

(5) BE IT RESOLVED THAT this Association pass a vote of thanks to the chairmen and members of the several committees for the work done by them.

(6) BE IT RESOLVED THAT this Association pass a vote of thanks to the management of the Edgewater Beach Hotel for their courtesies and splendid service.

The social side of the meeting was under the direction of R. O. Jackson of West Disinfecting Co. and R. S. Solinsky, National Can Co. Among the events arranged was a golf tournament, held on Sunday afternoon, June 6, at the Bon-Air Golf Club, Chicago. The winner was Charles Furst of Furst-McNess Co., who carded an 88, one stroke higher than the score with which he tied for first place a year ago. There were four players tied for second place, each with 91.—H. Marshall Clark of Dr. Hess & Clark, Inc.; Melvin Keim, Clean Home Products Co.; Max Goodrich, Hudson Manufacturing Co.; and Thomas Morgan, MacNair-Dorland Co.

Among the firms who donated prizes to be contested for at the tournament were the following: Acemeline Manufacturing Co., American Can Co., Aromatic Products Co., Henry Barroll & Co., S. H. Bell Co., Breuer Electric Mfg. Co., Continental Can Co., P. R. Dreyer, Inc., Federal Varnish Co., Fritzsche Brothers, Inc., General Naval Stores Co., Givaudan-Delawanna, Inc., H. D. Hudson Mfg. Co., Magnus, Mabey & Reynard, Inc., O'Connor & Kemp, Owens-Illinois Glass Corp., Upressit Products Corp., van Ameringen-Haebler, Inc., T. F. Washburn Co., Williams Sealing Corp., Wilson & Bennett Mfg. Co., and the Edgewater Beach Hotel.

Another feature of the entertainment program was a dinner held in the Michigan Room of the Edgewater Beach Hotel the evening of Tuesday, June 8. Dinner was preceded by a cocktail party at which the members were the guests of the

National Can Co. Following dinner, the group of 200 saw an elaborate floor show.

A number of addresses and reports presented at the meeting are given in full elsewhere in this issue. The official registration list as issued by Secretary John H. Wright follows:

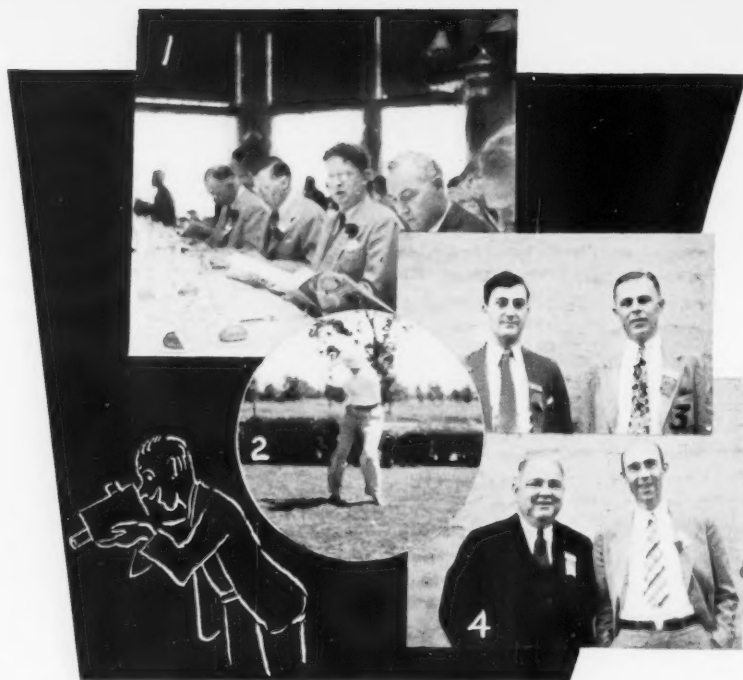
Official Registration at Chicago

Firm	Representative
Acemeline Manufacturing Co.	L. J. Novak
Allaire, Woodward & Co.,	R. P. Neptun
Allied Drug Products Co.,	M. O. Clark
American Can Co.—J. E. Baechle,	M. J. Eberhart, Louis J. Freundt,
J. M. Nicoll, H. L. Sipple, T. E.	Alwyn, Louis A. Trevisan
American Disinfecting Co.	Alexander Fabry
Armour Laboratories—Dr. Hopkins,	Dr. E. F. Pike, Mr. Shinn
Aromatic Products Inc.—S. J. Vance	Atlantic Refining Co.,
F. I. L. Lawrence	Austin Sanitary Service,
Anthony Paul	Baird & McGuire, Inc.—G. M. Baird,
Jack Varley, James Varley	Baldwin Laboratories,
H. W. Baldwin, Chistopher A.	Murray, Harmon C. Smith
The Barrett Co.—E. J. Garvey,	R. C. Quortrup
Henry Barroll & Co.—J. N. Davies	Beuret Chemical Sales,
Robert L. Beuret	Black Flag Co.—Talbot J. Albert,
F. X. Tiddy	J. M. Booth Chemical Co.,
Joe M. Booth	Breuer Electric Mfg. Co.,
A. A. Breuer	Calumet Refining Co.—M. B. Jester
Cenol Chemical Co.—Mr. Sewell	Chemical Supply Co.
Henry A. Nelson	Clean Home Products Inc.,
Bernard Brown, Charles Hermann	Continental Can Co. Inc.,
John F. Fenn, O. G. Jakob, G. E.	Kummerow, R. V. Wilson, L. J.
LaCava	William Cooper & Nephews Inc.,
J. M. G. Siddons	Davies-Young Soap Co.,
R. H. Young	Derris Incorporated—R. W. Birdsall,
A. E. Miller, Ray Morris	Des Plaines Valley Mosquito Abate-
ment District—J. Lyell Clarke	Dodge & Olcott Co.—W. G. Moore,
Frank S. Topper, Ralph W. Bush,	George N. Collins
C. B. Dolge Co.—Clarence Weirich	Dow Chemical Co.,
Donald K. Ballman, W. W. Sun-	derland
E. I. duPont de Nemours Co.,	S. J. Hill, W. H. Tisdale
Federal Varnish Co.—M. J. Flanagan	Fritzsche Brothers Inc.
Joseph A. Gauer	Fritzsche Brothers Inc.
K. S. Spraker	Fuld Brothers—Melvin Fuld

(Turn to Page 117)

At the
23rd Mid-Year
Meeting of
the National
Association of

Insecticide and Disinfectant Manufacturers



Snapshots at Chicago

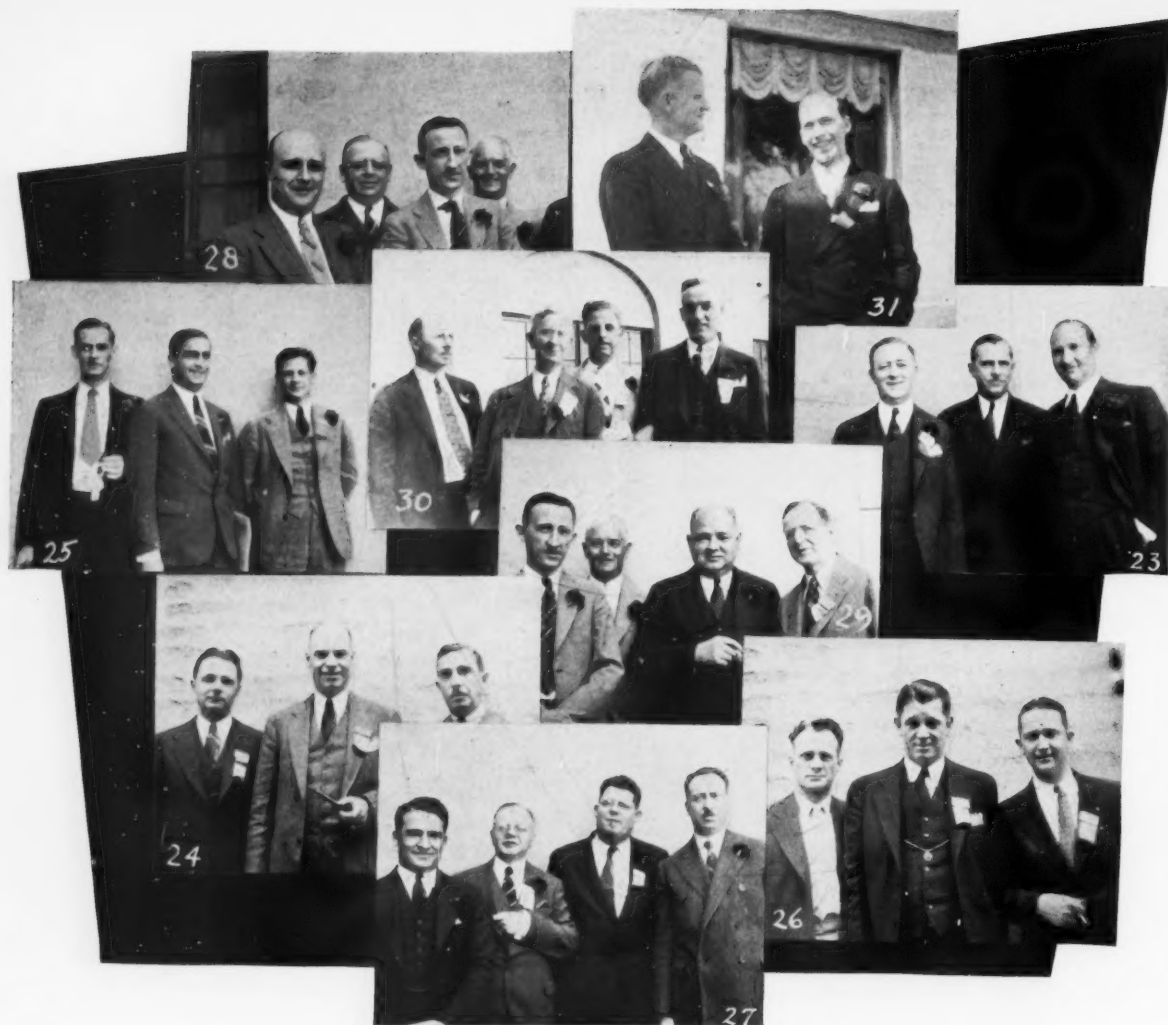
UNTIL the Editor's Graflex was accidentally dropped and incapacitated, the business of picture taking was going along in fine style at the Chicago meeting of the National Association of Insecticide & Disinfectant Manufacturers at the Chicago Beach Hotel last month. And, then, ended the pictures of those attending the meeting with many shots as yet untaken. However, from the wreckage was salvaged a few pictures worthy of appearing in the public print. They follow: 1. (left to right) Doc Hedenberg of Rex Research and Mellon Institute, Bill Moburg of Fly Tox, and Joe Armstrong, also the same, — Joe told the one about the two "gentlemen from ze Argentine" who died of poison,—and Neptun of Allaire-Woodward. 2. Believe it or not, our prez, Bill Eddy, shooting off the first tee in the golf tournament. Note his leaning into the wind,—and what a wind. 3. Mel Fuld of Fuld Brothers and Bill Pollnow of Vestal, both looking very serious and sedate. 4. Nels Gothard of Sinclair has just told the irrepressible Friar Thompson of Hercules,—or rather Friar has told Nels,—the



one about the mother who ate bitterweed. 5. A good shot of Bill Moburg getting some documents out of his car. He looks very serious. 6. One competitor stated that he did not like the odor of the other. John Powell of Powell and Harold King of Prentiss. Harold thinks this one, and all his com-

petitors, are just jokes. He said so. 7. The man that the electric sprayer made famous, or vice versa. It's Ad Breuer, head of Breuer Manufacturing Co. 8. In this case, Jake Brenn and Clarence Seguin, both of Huntington Labs., are laughing at the camera man, who, they stated looks funny enough to

get a slight grin any time. 9. Just after a sock into the teeth of the howling gale on Bon-Air Golf Course,—Lester W. Jones, otherwise known as Jonesey, McCormick's P.A.,—and the ball ended exactly 57 yards out following a good 200 yard drive. 10. Wally Thomas of Gulf and Dick Birdsall



of Derris, both in serious moods. Wally was talking politics when this was taken. 11. Doc Thomssen of Watkins and Louis Freundt, one of the real old-timers of American Can. Louis celebrated his 33rd wedding anniversary the day this was taken. He has stood the strain pretty well. 12. (Way down at the bottom) Frank Nelson of Stanco, Pete Dougan of Merck, feeling quite chipper, and Doc Lewis of Penick. 13. This time Dick Birdsall and Wally Thomas have Doc Badertscher of McCormick sandwiched in between them. (Good shot of Doc's new son elsewhere in this issue.) 14. This is Doc Hamilton of White Tar, our past prez and the fellow who handled the program arrangements at Chicago. 15. George Simmonds of U. S. Sanitary, Mel Flanagan of Federal Varnish (his side-kick Sonny Lawson was home sick), and Jim Green of

Standard of Indiana. 16. By gosh, if it isn't Powell again, this time giving Jake Brenn hell because Jake is a Democrat, which lecture seems to be annoying Jake greatly. Clarence Sequin looks on. 17. Dr. Emil Klarmann, Lehn & Fink's chief chemist, and our chief authority on B. typhosus and all those other bugs. 18. Hillman of Indiana and Nowak of Nowak Milling. 19. The man who ran the entertainment, R. O. Jackson of West Disinfecting,—and a good show it was,—one of the best we've seen. 20. Henry Nelson of Chemical Supply, peeking around the corner,—a member of the Board who, like van Ameringen, says "wiz," "dis," and "dat." Also O'Connor, Jr. of O'Connor & Kremp, and Ray Whitman of Monsanto. 21. One of these blokes is Max Goodrich of Hudson, but we can't make out the face of the other. Maybe you can. We'll

have to speak to the photographer about this. 22. Some golfers on the first tee. We recognize Bob Solinsky of National Can looking at the camera,—and Friar Thompson. 23. O'Brien of Hercules, Bill Weed of Niagara, and Mel Keim of Clean Home. 24. Cooper of Koppers, Roland Sturhahn, dean of the Monsanto delegation, and Heller of B. Heller. 25. Hogg and Mayfield of Hercules surrounding Trevisan of American Can. 26. Harold Noble of Penick, Victor Garvin of Nowak, and John Curlett of McCormick. 27. Bill Kroneman of Sherwood is making a speech surrounded by Doc Hamilton, Little of Hercules, et al. 28. A few Sinclairs,—Doc Grady, looking sort of mean. 29. More Sinclairs with a Gulf thrown in,—Grady, Huckins, Gothard of the Gulf, Thomas. 30. Al Weingard of Pennsylvania Refining and O'Connor of O & K, N. Y. That's all.

Better Insecticides Thru Research

A Review of Recent Progress in the Development of Improved Insecticides and Disinfectants

By W. H. Tisdale*

*Grasselli Chemicals Dept.,
E. I. du Pont de Nemours & Co.*

RESEARCH is essential to the advancement of civilization. Useful products of today are replaced by better ones tomorrow. Often entirely new and important industries result from the findings of research. No phase of our economic system, including methods of controlling destructive pests, can afford to be without research. Organized investigations directed toward the development of more effective means of pest control have not been commensurate with the importance and tremendous economic losses caused by the numerous pests that compete with man for his means of subsistence. Yet much has been accomplished. The battle front is being broadened along many lines for more extensive, concerted attacks in the future.

During the period of territorial expansion and occupation of new lands, it was not necessary to continue to cultivate soil that had become unprofitable due to pests or other cause. Now that virgin lands are practically exhausted in our country, it has become necessary for man to develop means of overcoming the numerous foes which were responsible for his migration and which he unwittingly helped spread through his means of transportation. With the growing density of our population and increasing intensity of our methods of production in industry and agriculture, conditions become more favorable for the spread, multiplication and destructiveness of pests.

Plants, animals, prepared foods, clothing, building and numerous other items are damaged or destroyed. Man himself is tortured with bites, stings, diseases, and often death.

The losses caused by insects, fungi, and bacteria to plants, farm animals and the products of agriculture, are estimated in terms of billions of dollars annually. Add to this the damage done to man and his other means of subsistence by these pests and numerous other pests such as weeds, rodents and other destructive vertebrate animals, protozoa, various worms, destructive marine, animal and plant life and other pests, and you can form a mental picture of the tremendous importance of man's battle against pests. We know that insects antedate man by possibly millions of years. Many of our leading entomologists consider insects to be man's most formidable enemy. In spite of this advantage in adaptation and experience by possibly his worst enemy, man has developed and advanced to his present state of civilization within comparatively few centuries.

In the earlier stages of protection against pests mechanical methods were commonly used. In more recent years, especially during the past half century, more highly intellectual means of control have been devised. Selection and breeding of plants and animals for disease resistance and immunity, serums, vaccines, the use of natural parasites, and chemical measures, are being

employed. In the earlier use of chemicals the few then known poisons were selected. The increase in insect populations, and the resulting demand for better poisons and more and heavier applications of them, has aroused the interest of government officials and the people generally over the possibility of poisoning humans who eat treated fruit and vegetables and who may, in other ways, come in contact with excessive amounts of poisonous pest control chemicals. The demand is for safer means of pest control. The challenge has been accepted by public and endowed research institutions and commercial chemical companies. Research efforts are being expanded in the direction of chemical control as well as along other important lines. The battle is between overwhelming numbers and dogged persistence on the part of the pests against the intellectual methods of man. The progress made by man so far indicates that he will probably be able to maintain if not strengthen his position in the future. This will prove true if research in insect and plant disease control proves as effective as it has in the control of human diseases.

Serious investigational work was directed toward the control of the diseases of humans and serious plagues were yielding to the efforts of science when the ravages of insects and diseases of farm crops and animals, and the destruction of man's other means of subsistence were still considered by many to be unavoidable.

* Address before Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 7, 1937.

able acts of God. Many of the contagious and communicable diseases of man which have caused serious epidemics have been either eradicated or brought under control. Progress continues—Recently a serum is reported to have been produced that offers considerable promise for the control of pneumonia. The outstanding recent advancement in the use of chemicals for the control of human diseases has been the discovery of the use of Prontolyn (para aminobenzene sulfonamide), Prontosil (4-sulfamido-2,4-diamino-azobenzol hydrochloride) and sulfanilamide for the control of streptococcus infections. In addition to the control of other serious infections, kidney and bladder infections may be eliminated by this chemical means. A new local anesthetic ten to fifteen times as effective as ether has just been announced. This should prove an important supplement to disease control.

WHEN the needs become sufficiently urgent, action and results may be expected. With conditions becoming more and more favorable for the development and spread of pests, and with the greater poison hazards to humans involved in the more extensive and intensive use of chemical control measures, research organizations have intensified their efforts toward the development of more effective and safer means of control. Much has been accomplished within the past few decades and especially in the last few years. Much still remains to be done.

There are a number of important steps which contribute to greater efficiency and safety in the control of insects and diseases with chemicals. Poisonous products are being handled with greater care to insure safety. Where it is necessary to use poisons on food materials or in household or storage they are removed by washing, aeration, and other means to protect the lives and health of humans. Better supplements such as wetting, penetrating, spreading and sticking agents and properly selected com-

patible inerts improve the effectiveness of pest control chemicals. The efficiency of active products may be increased through chemical combinations with other elements. In the case of the cumulative poisons the more effective compound, while still poisonous, requires less of the cumulative toxic element and may be considered safer.

The most desirable thing to do is to find effective products that are non-poisonous to humans to replace the poisons and to fill the needs where satisfactory control measures are not available. Increased attention is being given to biological means of control of many parasites, such as the selection and breeding of plants and animals for disease resistance, and the use of natural enemies of the pests to effect control. Such measures do not involve poison hazards but so far they have replaced the use of chemicals only to a limited extent. The need for continued research to develop better chemical control measures is outstanding. Definite progress has been made and is being made along these various lines of attack.

Safety methods have been devised for handling solid, liquid, and gaseous poisons. Much is being done to educate the user to employ these methods in the handling and application of poisons for pest control so that valuable materials may not be lost by overzealousness in trying to eliminate all materials of a poisonous nature.

The removal of arsenic, lead, fluorine and other poisonous residues from fruit and vegetables with acid and alkaline baths is proving successful. Supplements to these baths, such as sulfonated naphthalenes, sulfated alcohols, and sulfonated phenol derivatives and their salts, which serve as wetting agents and detergents, increase their efficiency.

The development of supplements for use with insecticides, fungicides and bactericides has been marked within the past few years. For sprays, ordinary soaps were replaced by improved casein spreaders, sulfonated oils, oil emulsions, to some extent by amine soaps, sulfite waste liquors

from the paper industry and by other products. More recently the so-called hard water soaps have been found effective. Now such products as sulfonated naphthalene, sulfonated phenol derivatives, sulfated alcohols and sulfated fatty acids are being extensively used. These products, in addition to being highly effective as wetting and spreading agents, are compatible with most pest control sprays and with natural waters, weak acids, and weak alkalis. They also are effective in the preparation of wettable and dispersible powders.

For sticking or holding the effective chemicals in place, when sprayed or dusted, the newer developments consist of the use of rosin emulsions, colloidal resinous materials and synthetic plastic products. These may be used in combination with the spreading agents or they may be used separately. Colloidal clays, soybean, wheat and other flours, and newly found gums, are proving useful in this field.

Improved inerts, such as more finely divided earths, and other powders have been developed for use, especially with powders for dusting

FOR the control of chewing insects, progress has been made toward the improvement of arsenate of lead and its compounding for efficient use. Attempts to develop an equally effective arsenical without the lead have not proved entirely successful, although zinc arsenate and insoluble calcium arsenates offer some promise.

The discovery of the effectiveness of the fluosilicates as stomach insecticides for possible agricultural use resulted in considerable optimism with regard to their replacing arsenate of lead and other arsenicals. However, the fluorines were found to be cumulative in the bone tissues of animals and to cause injury. Fluorine was placed under the same government restrictions as arsenic and lead. Yet due to their high degree of effectiveness against certain kinds of insects a considerable usage has developed for these fluorine compounds.

Due to its non-cumulative effects, nicotine, although highly poisonous, has been studied in various fixed or stable combinations as a stomach insecticide. Some of these products, such as nicotine tannate, nicotine bentonite (nicotine aluminum silicate) and nicotine humate or combinations with finely divided organic matter such as peat are promising for certain purposes.

The discovery that some of the extractives of the fish poison plants, in addition to the rotenone, have stomach poison value, and the adaptation of the ground or powdered roots of these plants as insecticides to make use of this discovery, has proved to be one of the outstanding developments in the control of insects attacking both plants and animals. These rotenone-bearing products have both stomach and contact insecticidal value.

Of still more recent development are a number of products, chiefly experimental, including cuprous cyanide, diphenyl amino arsenious oxide, phenothiazine, and others of less prominence. Phenothiazine has been used extensively in an experimental way and has been found under western conditions to be more effective than arsenate of lead for the control of codling moth of fruit. Results are erratic in the east. The product also has a tendency to cause dermatitis on sensitive people. Further investigations of these new compounds are under way.

ALTHOUGH contact insecticides have not received the adverse criticism due to possible cumulative poisonous properties which are possessed by some of the stomach poisons, extensive investigations have been directed toward rendering the ones in use more effective and to finding new and better ones. The extensive investigations of the U. S. Department of Agriculture and other institutions of the chemical structures of rotenone, nicotine and pyrethrum and their related compounds, and their effectiveness as insecticides, have proved important

in the development of better contact insecticides. The discovery by the U. S. Department of Agriculture that neonicotine is the most active of the products related to nicotine, followed by the discovery by Russian investigators of the product in its levorotary form in a plant, *Anabasis aphylla*, constitutes a definite advance. The product of this discovery known as *Anabasin* is an effective contact insecticide.

Combinations of pyrethrum and rotenone, which have the advantages of the superior paralytic action of pyrethrum and the lethal action of rotenone, are found to be useful.

The discovery of the insecticidal value of the alkyl thiocyanates is important. Although the products of the earlier discovery proved too volatile and too toxic to plants to be of practical value, later developments such as trimethylene dithiocyanate, butyl carbitol thiocyanate and lorol thiocyanate have become useful in the control of certain agricultural and household pests.

For contact insecticidal purposes, oxides and supplements to insecticides and disinfectants generally, much improvement has been made in oils of various kinds. Highly purified hydrocarbon oils have come into more general use, the medium to heavier fractions for plant sprays and the lighter or kerosene fractions of the highest purity for use in fly sprays. Fish oils and certain vegetable oils are finding use as spreading and sticking agents for pest control products. The emulsification of oils has been studied and improved so that the proper stability and breaking properties are obtained to result in greater efficiency. Tar oils, and hydrocarbon oils containing activators or effective supplements such as cresylic acid, thiocyanates, nicotine and certain phenolic derivatives, appear promising as dormant sprays for ovicidal purposes and for the killing of the resistant stages of certain insects. Supplements other than rotenone added to pyrethrum appear to be of value in fly sprays. Fractions of pine oil and certain synthetic materials are showing promise.

Selenium and certain of its compounds have been found especially effective for red spider and other mites and certain sucking insects. However, certain selenium compounds have been found to be very poisonous to warm blooded animals unless the proper amount of sulfur is present.

As fumigants, nothing has been found that equals the old and extensively used products, carbon disulfide and hydrocyanic acid gas. In addition to the less poisonous compounds which have long been used such as naphthalene and its derivatives and ortho-and-para-dichlorobenzenes, certain other products have been developed including ethylene oxide, ethylene dichloride and more recently the alkyl formates, tetrachlorethane, and other chlorinated aliphatic hydrocarbons. Methyl bromide is being considered. The safety of some of the last mentioned products is still in question.

INSECT repellents are becoming of greater importance with the spread of the Japanese beetle. Due to the occurrence of this insect in such enormous numbers and its resistance to poisons, plants sprayed with poisons will eventually be eaten anyway. Repellents are considered the most logical means of control. Derris or rotenone bearing sprays and synthetic products, such as tetra methyl thiuram disulfide, offer considerable promise for replacing lime, arsenate of lead, and other products that produce objectionable visible residues.

As termite repellents chlorinated naphthalenes, chlorinated phenols, chromated zinc chloride, beta naphthol and alpha nitronaphthalene appear to have definite value.

For the protection of woolen fabrics and other animal products from the attacks of moths, certain highly stable organic fluorine derivatives are coming into use. Organic naphthenates of the straight chain and cyclic types have shown promise.

Extensive progress has been made in recent years in the develop-

ment of more effective disinfectants. Outstanding among these developments are the uses of the water insoluble coppers, chlorinated phenols, and the organic mercury compounds. Copper carbonate has come into extensive use as a wheat seed disinfectant to control bunt or covered smut. Copper ammonium silicate, copper resinate, copper oxychloride, copper zeolite and red copper oxide are other compounds showing promise as disinfectants. The chlorinated phenols and certain of their derivatives have proved effective for the control of sap-stain of freshly sawn green lumber during the curing process and are useful in the preservation of certain kinds of wood and wood products. The organic mercurials have come into extensive use as seed, soil and lumber disinfectants. Corn seed treatment was not developed until the advent of the organic mercury disinfectants. Satisfactory dust disinfectants were not available for the treatment of the seeds of oats, barley, flax and cotton, which are now successfully treated with organic mercury dusts. The most effective of these are the aryl and alkyl derivatives of mercury. The ethyl mercury compounds are the most extensively used of these products. They are highly effective as seed and soil disinfectants for the control of sap-stain of lumber and for other purposes. Both ethyl and phenyl mercury salts are being used for certain pharmaceutical purposes.

Formaldehyde dust has been developed for the treatment of seeds and soils. Salicylanalide, thiuram sulfides, thiocarbamates, naphthalene derivatives, chloramine and certain organic dyes, have also been found to have value for certain purposes.

In reviewing some of the advances that have been made, comparatively few new compounds have been mentioned. This, by no means, gives you a complete picture of the extensive investigational work that has been done in the fields of chemical synthesis and biological evaluation. Several thousand new compounds have been prepared and tested within the last few years. The

ones mentioned have reached the stage where they are known to have merit. Others may evolve from this list later with equal or greater value.

PEOPLE have become poison conscious. The demand is for pest control chemicals that will destroy life and at the same time not injure life. In other words, the chemical must kill or control the parasite and not harm the host, whether plant or animal. It must be safe to humans who apply the treatment, eat the treated products or otherwise come in contact with the control chemical. Harmless and valuable insects, fungi, and soil flora should not be destroyed by these chemicals.

The fulfillment of such a requirement rests on a very sensitive balance. It depends on taking advantage of the specific differences in living matter. Both physical and chemical factors are involved. The trend is away from the more universally toxic chemicals and toward specifics.

The fact that so wide a range of specificity is found among living beings, both plant and animal, which are organic in nature might of itself point to the field of organic chemicals as offering greater possibilities for developing effective, specific control measures for insects, fungi, and bacteria. The occurrence of highly effective products in plants such as nicotine, rotenone, pyrethrum and, more recently, the discovery that the extracts of certain fungi are excellent fungicides, strengthen the organic theory. The successful use of synthetic organic products such as formaldehyde, certain dyes, hexyl resorcinol, compounds of cresol and phenol (phenolic derivatives), derivatives of naphthalene, organic sulfur compounds and others are definite proof that results can be accomplished in the laboratory.

Once a product is synthesized in the chemical laboratory, production and quality may be standardized and the possibilities of uniformity are much better than with the naturally occurring products. With increasing use the synthesized product is likely

to become cheaper to the consumer, while the opposite may be true with the naturally occurring product which is limited to the amount obtainable from the naturally fluctuating supply of toxin-bearing plants available. The chances that some of our commonly grown farm crops may serve as raw material for synthetic pest control chemicals are probably as good or better than that new and valuable toxin-bearing plants will be discovered somewhere in the world and grown successfully on our lands.

The prediction that through the development of specifics for the numerous uses in the pest control field our supply houses for such materials will be more like our present drug store, may not be greatly overdrawn. It seems definitely certain that in solving satisfactorily the problems now confronting us, and those that no doubt will arise in the future, additional and more specific products will be required.

In the development and application of more refined pest control measures, more thorough and expert service will be required. To obtain the maximum efficiency from the chemical, the insect problem or disease must be properly diagnosed and the most effective remedy applied. This, of course, has been and is important with the products now in use, but may become increasingly important with future developments.

Distillation of Pyrethrum

The active insecticidal constituents of pyrethrum flowers are obtained by distillation under very high vacuum of about 10^{-2} to 10^{-6} mm. of mercury and with the distilling and condensing surfaces only about 1.5 cm. apart. The dried powdered flowers may be treated directly or may be fed to the still in suspension, or as an extract in a liquid, which may be nonvolatile or partly or wholly volatile under the conditions of distillation. Eric W. Fawcett and Imperial Chemical Industries Ltd. British Patent No. 459,541; through *Chem. Abs.*

The Need for Specialized INSECTICIDE Testing Methods

By William F. Kroneman*
Sherwood Petroleum Co.

IN 1932 this association adopted the Peet-Grady method as a standard for the evaluation of liquid insecticides. From time to time modifications and improvements in the technique have been suggested and considerable work has been done along these lines.

Just a year ago we adopted here on this floor the official Peet-Grady insecticide, which was certainly a highly constructive step forward, as it gives a yardstick for comparing biological evaluations.

Now, all of this work, so far, in connection with the official Peet-Grady method, as well as other testing methods, such as Richardson's or Campbell's Turn Table Method, is based on flying insects.

The Testing Committee has spent hours upon hours along these lines. By this I mean along the lines of biological evaluation and standardization of insecticides, based on tests on flying insects.

Nothing has been done so far in a coordinated way regarding crawling insects. We have talked about it now and then, but is it not a fact that for some reason or another our attitude has been that the average liquid household insecticide is perfectly satisfactory in every way for the control of all crawling insects also?

In a very general way most of these liquid household insecticides will kill flies, roaches, moths, bedbugs, fleas and ants, provided the consumer goes to considerable trouble when it comes to trying to kill crawling insects and I, for one, would

certainly hate to go on record in making the assertion that the average liquid insecticide with a grade "B" association rating and having a kill of approximately 65 per cent, is the final solution of the crawling insect problem, because I know, and I think we agree, that this is not the case.

When we approach the field of crawling insects, a number of difficulties present themselves immediately. For flying insects we need only consider liquid sprays. For crawling insects we must consider liquid sprays as well as insecticides in powder form and possibly in paste form. I do not think it is necessary for us here to go into the question of fumigants. If we try to cover too large a field at one and the same time, we shall probably get nowhere fast.

The choice of the testing insect is very important. It appears from the scant literature available on tests and testing methods for crawling insects that the German cockroach, *Blattella germanica*, is the most suitable insect for this purpose. My experiments have been confined to the American cockroach, *Periplaneta americana*, and to the German cockroach and in these tests the German cockroach shows smaller variations in tolerance, as compared with its larger American cousin. This is about as far as anyone has gone with this problem, to the best of my knowledge.

Tests based on the number of seconds it takes to paralyze one roach, or subcutaneous injections into one roach at a time, are very interesting from an academic point of view, but they are certainly not practical. We need for crawling insects a method

enabling us to test a sufficiently large number of insects at one time during the same experiment and a method which approximates the actual application of the insecticide under practical conditions.

When we have arrived at definite results and conclusions regarding the control, and regarding the standardization of an insecticide for one crawling insect, let us say the German cockroach, this would not entitle us to assume that the same results will apply to other crawling insects.

There are, of course, quite a number of insecticides on the market which have been especially packaged for use against bedbugs, fleas, moths and even silverfish separately. Particularly the field of moth control has received considerable attention and there are a number of highly satisfactory products on the market for this specific purpose. However, the average insecticide label still bears the statement that it will kill all of the well known household pests and, as a matter of fact, some manufacturers would like to make a still broader statement on their packages and say, "kills all insects", if it were not for our guardian angel, the U. S. Department of Agriculture.

THE principle of recommending one insecticide for everything reminds me of the old proprietary medicines which were supposed to cure everything from chilblains to cancer and it reminds me of the old reliable army prescription—regardless what ailed you, a good dose of castor oil would help

* Report before Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 8, 1937.

you, even if you had acute appendicitis.

It is a perfectly natural human trait to go along the lines of least resistance, but progress does not lie along these lines.

The merchandising of one insecticide for all purposes limits sales and is simply the outcome of our famous quantity production principle. I am sure, however, that in a nation of 125 million people, not to mention export business, there is a very definite market for proper insecticides for the control of certain definite insects.

We should not expect to rest on our laurels. We must realize that we cannot escape facts. We certainly cannot, as an association, deliberately ignore them and I do not think that we have the right to point out any one particular type of liquid insecticide and say that this is a cure-all.

I think we ought to have courage enough to recognize facts, to come out into the open and to admit frankly that there is a crying need for a standard testing method for the control of crawling insects and that there is a crying need for specifications for insecticides of this type.

Are we ostriches? Are we going to stick our heads into the sand and let the world go by without seeing what it is doing, without even wanting to see what it is doing.

Since the official Peet-Grady method was adopted in 1932, based on winged insects, five years have gone by. I think we should make a deliberate attempt not to let another five years elapse before we do something definite and constructive regarding testing methods and standardization of insecticides for use against crawling insects.

— • —

A concern in Istanbul, Turkey, is interested in securing an agency for sale of insecticides and glycerine. Sellers may get further information through the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., mentioning inquiry No. 3314.

Coal Tar Disinfectants for Fruit Tree Spraying

By Dr. E. G. Thomssen*

J. R. Watkins Co.

IT was my privilege last year to address this association on this subject of coal-tar disinfectants, with particular reference to their insecticidal efficiency. Mention was made of the utilization of emulsifiable coal-tar acid oils as an aphicide for certain dormant, deciduous fruit trees.

On the basis of more extended studies during the subsequent year, it is now possible to present a progress report bearing directly on the efficacy of coal-tar disinfectants as a fruit-tree spray. Such products are now quite extensively employed in the apple fruit belts of New York, Michigan, Washington and certain other states. First used more or less in an experimental way, the present year finds large numbers of growers in certain sections adopting coal-tar disinfectants in their spraying programs. It is their apparent consensus of opinion that the use of such materials affords a high level of control more economically. Most orchardists who used these disinfectants in a small way on an experimental basis repeat with increased orders as they are generally convinced of results.

As employed by these orchardists, coal-tar disinfectants are used not only as a dormant spray, as recommended by an increasing number of state agricultural experiment stations each year, but as an additive for such other spray materials as arsenate of lead, lime-sulfur

and Bordeaux mixtures. It is contended that a small quantity of the tar oil disinfectant enhances the spreading, wetting and adhesive qualities of the spray with which it is combined, resulting, therefore, in more efficient and lasting control.

As previously mentioned, experiment stations recommend emulsifiable tar acid oil products chiefly for dormant spraying to destroy overwintering eggs of plant lice or aphids on fruit-trees. Used in stronger quantities than necessary for ovicidal action, certain other pests are believed to be vulnerable to the toxic effects of the tar acid oil.

These same stations, however, are still either non-committal or withholding opinion on the possible insecticidal role of coal-tar disinfectants other than for dormant spraying. This appears to be due to the fact that the majority of tar acid oil products on the market are more or less unrefined for safe application to foliage.

More recently, the use of coal-tar disinfectants has been extended to include applications for ornamentals to destroy certain varieties of aphids and to hot house plants for repelling a miscellany of general pests.

No data has been published relative to the fungicidal action of coal-tar disinfectants. The Virginia Experiment Station reports that tar oils may be of value as a bactericide for peach leaf curl but believe further experiments are necessary for verification. In this connection, the

(Turn to Page 119)

* Address before Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 8, 1937.

Recent Developments in the DISINFECTANT FIELD

By Burton G. Philbrick*

Skinner & Sherman, Inc.

THE method of testing disinfectants as usually carried out admittedly gives a one sided picture of the product, since the killing power against a given test organism in vitro is emphasized and little or no attention given to the effect of organic matter or its possible toxicity to the living tissue.

Nye (1) in a recent article in the *Journal of the American Medical Association* reports the results of an extremely interesting and carefully executed attempt to evaluate some of the antiseptics in general use. He departs from the misleading custom of using the main ingredients as the basis of his tests and uses and reports his results on the basis of the solutions as sold, and the useable strength.

An ideal antiseptic is defined by Nye as one that is able to kill bacteria in at least as high a dilution as it does normal tissue cells. In other words, its toxicity for tissue cells should be no greater than its bactericidal power. He also stipulates that it must be reasonable in cost.

With this definition in mind, tests were made of four solutions containing iodine, seven containing mercury, two containing chlorine, and three well-known mouthwashes, hexylresorcinol, "Listerine," and "Pepsodent."

The bactericidal activity was tested by the F.D.A. method at 37° C. with *Staph. aureus* as the test organism, with secondary transfers to avoid bacteriostatic action of any of the

solution which might be carried over, this being particularly important in the case of the mercuric compounds. The results of these tests showed the compound of iodine U.S.P. to be by far the most effective. The bactericidal activity of the solution containing iodine was directly proportional to the iodine content. In all an actual iodine concentration of about 1:4500 was effective. Solutions containing chlorine came next in effectiveness, then the miscellaneous group (mouthwashes) and finally the mercury compounds. The last group showed considerable bacteriostatic power, but actual killing was accomplished by only three, one of which had to be used undiluted and another diluted 1:2.

The same tests were next repeated in the presence of 50 per cent horse serum. The three strongest iodine solutions were the only ones that retained bacteria killing power in the presence of serum.

The diffusibility of the various solutions was tested by the use of parlodion sacs; the dialysate was tested against *Staph. aureus* by the F.D.A. method as before. Only five of the dialysates were bactericidal, the three strongest iodine solutions, the mercury bichloride, and one of the chlorine solutions.

The toxicity was tested by the following techniques. A 25 cc. volume of defibrinated human blood was added to different dilutions of the antiseptic solutions prepared with Locke's solution, and incubated for 10 minutes at 37° C. Then a drop of a heavy suspension of killed *Staph*

aureus was added to each tube. The tubes were then rocked in an incubator at 37° C. for 20 minutes. Smears were then made on slides. These were stained with Wright's solution and examined to determine the number of neutrophilic polynuclear leukocytes judged to be dead or badly injured at the time of the addition of the bacteria.

"The toxicities of the iodine solutions were directly proportional to their iodine content. The leukocytes withstood a primary iodine concentration of about 1:1100 for ten minutes. The iodine solution made with sodium iodine had a toxicity identical with that of compound solution of iodine, U.S.P. The chlorine solutions were extremely toxic and the mercury solutions varied from no toxicity to moderate toxicity. The miscellaneous solutions were only moderately toxic. The two containing alcohol behaved quite similarly in that there were secondarily killed leukocytes which suggests that the alcohol or some other common ingredient was responsible. Cells killed after the addition of the cocci were also noted in preparation from both chlorine solutions and two of the mercury solutions."

Further tests using the dilution of antiseptic solution which would permit 50 per cent of the leukocytes to survive showed that only with the three iodine solutions could bactericidal action also be obtained. As a further check on the toxicity .2 cc. amounts of the different dilutions were injected intradermally into the abdomen of several rabbits. Dilu-

*Report of Committee on Disinfectant Literature & Patents, before Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 7, 1937.

tions of each antiseptic were made until no lesion or a questionable lesion was observed at the site of inoculation six days after the injection. The maximum non-toxic dose was thus determined. Those of the iodine and miscellaneous groups agree with their respective dilutions that were non-toxic for leucocytes within the limits of error of both tests. The mercury solutions were much more toxic on intradermal injection than they were in the whole blood mixtures, whereas in the chlorine group the reverse was found to be true.

The retail costs of all the solutions were also compared. In general, the unit prices of the mercury solutions were the highest and the miscellaneous solutions were next. The chlorine solutions and the iodine solutions were by far the least expensive.

ANOTHER paper dealing with the rating of disinfectants is that of Salle (2), who holds that the phenol coefficient valuation is justifiable if they are to be used only on inanimate objects or skin surfaces. If they are to be used on wounds or mucous surfaces, he believes a more accurate rating would consider also their toxic effects. It is suggested that their effect on the growth of living embryonic tissues be determined also. This would be measured by the Toxicity Index, which is the highest dilution of disinfectant required to prevent the growth of embryonic tissue divided by the highest dilution of the disinfectant required to kill the test organism. Theoretically the smaller the Toxicity Index the more nearly perfect is the chemotherapeutic agent.

The following indices are reported as obtained, — iodine .09, iodine trichloride 0.4, mercuric chloride 2.8, hexylresorcinol 3.0, metaphen 12.7, phenol 12.9, potassium mercuric iodide 13.3, merthiolate 35.3, and mercurochrome 262.0.

Further discussion of the evaluation of the germicidal activity of germicides by their toxicity is contained in an article by Hunt (3). A

technique is used in which the germicide is introduced into cutaneous lesions formed by the intracutaneous injection of .1 cc. of a 1:1 dilution of a 24-hour broth culture of an invasive strain of *Staph. aureus* into the control mice and 0.5 cc. of the undiluted culture plus .05 cc. of the disinfectant solution into the test mice. Observations are then made as to whether or not the progress of the lesion is halted. The tests indicated that none of the disinfectants, merthiolate, metaphen, mercurochrome, and chlor-iso-octyl resorcinol were able to shorten the healing time once the infection was established at the point of injection. The disinfectants of the alkyl phenol and alkyl resorcinol type and their halogen substitution were able to prevent the formation of skin lesions in most cases when administered at the site of injection within one hour.

In an article by Variety (4) a method is presented for testing the efficacy of oil sprays, a class of antiseptics and germicides not specifically provided for in Circular 198 of the Food & Drug Administration. One method is a reverse adaptation of the agar cup plate method in that the center of a large aluminum plate, already poured with agar inoculated with the test organism, is covered with an inverted petri dish and the oil sprayed over the whole. The protected area under the inverted petri dish acts as the control. In the other method which deals with the action in the absence of moisture, an area of 100 square inches is marked off on a glass pane and then smeared evenly with a culture of the organism. This smeared pane is then allowed to dry for twenty-four hours at 37° C. The test is then carried out by spraying the surface lightly with the oil spray under test and then swabbing the area at 15, 30 and 60-minute intervals. These swabs were then twirled in 15 cc. of melted nutrient agar and the agar poured into a sterile culture plate and incubated.

A discussion of the application of the phenol coefficient to antiseptics is contributed by Reddish (5) who maintains that the phenol coefficient

test was devised for use in testing the germicidal value of disinfectants, and is not intended or fitted for use in testing antiseptics and should be reserved for testing phenol like disinfectants only.

Costigan (6) reports the results of comparisons of the germicidal efficiency of hypochlorite solutions containing 200, 100, and 50 parts per million available chlorine, but prepared from hypochlorites of high and low alkalinity. The strongly alkaline hypochlorites were more germicidal against gram-negative than against gram positive organisms, while those solutions of low alkalinity were more germicidal against both groups.

MALLMAN (7) reports a study of dishwashing under practical conditions in dining halls and restaurants. He found that there is a distinct difference in the removal of bacteria among the detergent materials in general use, namely; trisodium phosphate, sodium metasilicate, sodium hydroxide and sodium hexametaphosphate as had previously been reported and that the addition of sodium hexametaphosphate to a detergent mixture produces a preparation that cleans better as shown by the effective removal of bacteria. This superiority is not due to a greater germicidal action, however, since tests made of the germicidal action of 1 per cent solutions of trisodium phosphate, of sodium metasilicate, and Schwartz and Gilmore mixture (40 per cent sodium hexametaphosphate, 15 per cent trisodium phosphate, monohydrate, 40 per cent sodium metasilicate pentahydrate and 5 per cent sodium hydroxide) all showed about the same action against *Staph. aureus* at different temperatures.

The author concludes that with a good detergent "hot water under practical routine conditions provides satisfactory destruction of bacteria on dishes and silverware," that wash waters should be maintained at a temperature of at least 140° F. and rinse waters at not less than 170° F.; that chemical disinfection should be recommended only

when hot water is not available. For cold water disinfection only chlorine sterilizers should be used, or comparable compounds that can be readily checked by a simple chemical test. Routine bacteriological examination of silverware and glassware are recommended.

The question of the use of fortifying agents in coal tar, cresol, and pine oil disinfectants is dealt with in an article by Fuld (8). The author finds that at the present time such agents are not well developed from a chemical standpoint and that definite knowledge as to the chemical and physical effect is meager, if not entirely lacking. The question is also raised as to the propriety and legality of labeling such a fortified coal tar disinfectant as simply "coal tar disinfectant." It would appear that such cannot be done.

A recent book by McCulloch (9) "Disinfection and Sterilization" furnishes an excellent reference book for one interested in the practical application of disinfectants and in sterilizing processes. The author presents data on the many classes of disinfectants and antiseptics in use and furnishes leads for further search if one desires. The author says in his preface "Since much of the science of disinfection is uncertain and beset with apparent contradictions, no attempt has been made to limit the presentation of data to irrefutable facts and indisputable hypotheses. To do so would have greatly curtailed the possibility of stimulating investigation of many slightly understood aspects of germicidal action. With this thought in mind, an endeavor has been made to supply the reader with a rather comprehensive list of references to available literature."

Patents

AMONG the patents noted in the last six months, those dealing with mercury or mercury-iodine compounds are the most numerous.

Andersen (10) describes a germicidal preparation, diphenylmercuric borate, which is stated to be of relatively low toxicity and suitable

for use as germicide in contact with human tissues. In another patent (11) he claims phenylmercury chlorate, bromate, and iodate for use as antiseptics and germicides. Further mercuric compounds such as phenylmercury salicylate, phenylmercury gallate, etc., are covered in another claim (12).

Schönhöfer and Bonrath (13) describe alkoxyalkyl mercuric salts of polybasic acids, an example of which is methy-oxy-ethyl mercuric silicate, and claim them to be suitable for use as disinfectants or as preservatives for timbers, glue, etc. Schönhöfer (14) also takes out a patent on an organic mercury silicate and the process of its manufacture.

Kimerlin (15) brings out a germicide consisting of a detergent and a mercury compound obtained through the reaction at a temperature and pressure above the atmosphere of a double iodide of mercury and a compound belonging to the group consisting of a glycol and glucol-ether.

A germicide with an H.L. phenol coefficient of 250 against *E. typhi* and 18 against *Staph. aureus* is claimed by Parke, Davis & Co. (16) for a product consisting of an alkali metal salt of mono-hydroxy-mercuri-tetra-iodo-dichloro-fluorescein.

Kharasch (17) describes the product obtained by the reaction of a solution of 1,2 ethyldiamine sulfite with ethyl mercuric chloride and also (18) that obtained by the reaction of ethyl mercuric chloride with a solution of 1,2 ethylenediamine thiosulfate.

Hart (19) prepares a germicide by using o-hydroxyphenol-mercuric chloride concentration to give only bacteriostatic action, mixed with an amyl cresol.

Cresols

Raiziss and Clemence (20) present cresol products claimed to be of exceedingly low toxicity but of high germicidal strength, these products being halogen derivatives of alpha ethyl propyl cresols—(a) monobromo (alpha ethyl propyl) meta cresol; (b) Monobromo (alpha ethyl propyl) orthocresol; (c) di-

chloro (alpha ethyl propyl) meta cresol. Further claim (21) is made to alpha propyl ortho cresol as a germicide.

Phenols and Phenolic Compounds

Goedrich (22) prepares water soluble bactericidal preparations by a process in which a sulfonated oil such as Turkey-red oil is deproteinized and a normally insoluble or sparingly soluble phenolic compound such as chlorthymol is dissolved in it by heating, and a polyhydric alcohol such as glycol is added to dissolve the residual protein remaining after the deproteinization.

Niederal (23) makes claim on a product consisting of a parateritary octyl phenol in which at least one nitro group is substituted in the benzene ring. This is prepared by the nitration of p-tertiary octyl phenol. Chlorine derivatives of the latter can be obtained by treatment with chlorine or sulfuryl chloride.

Thiocyanates

Helwig (24) describes a process for making alkali thiocyanate in which zinc cyanide is heated in aqueous alkali carbonate solution and with it at least one of the group consisting of sulfur and alkali thiosulfates.

Arsenical Compounds

Schmidt (25) patents the process for making trivalent polymetallo aryl compounds and the use of the same. These compounds refer to neutral water soluble organo-metal compounds of the arsenic series but more particularly to neutral water soluble derivatives of amino aryl arsenic compounds of the benzene series, the arsenic atom being connected with either arsenic, antimony or bismuth.

Miscellaneous

KYRIDES (26) describes hexy catechol which is the more effective of a series of alkyl catechols. It is claimed that it may be employed as are the resorcinol compositions in mouthwashes, tooth pastes, etc.

A compound, thioacrolein, is
(Turn to Page 119)

Fair Trade Laws

Some questions answered and discussed
on the Robinson-Patman Act and State
Fair Trade Laws, and how they affect
the disinfectant and insecticide
industries

By R. K. HINES*

General Counsel, Vick Chemical Co.

AN attorney who is not in general practice has one advantage in talking about legal matters in public,—he can rush in where angels fear to tread. Some of his audience, however, may get the impression that he is expressing company views or policies. I ask you to remember, in connection with my talk here, that I am expressing only my individual opinions. My subjects are ones with which all of you have acquaintance, many of you familiarity and some of you, perhaps, an everyday dealing. I will take up the Robinson-Patman Act first.

None of us have knowledge of this statute in the precise sense. Until the Supreme Court finally construes it, we are dealing in prophecy. It was twenty-one years after the passage of the Sherman Act before it was finally construed by the Supreme Court, so by the time this Act is passed upon, you may have had time to forget any false predictions of mine. It was nearly a year ago today, or on June 19, 1936, that the President signed the Robinson-Patman-Borah-Van Nuys Bill and it became a law. All to the joy of its relatively few protagonists and the consternation of the many who understood little about it.

The ground was plowed for the statute by the Federal Trade Commission's investigation of chain store methods of marketing and distribution, begun in 1928 and reported finally in 1934. The soil was ferti-

lized by the depression. The actual seed seems to have been sown by the United States Wholesale Grocers' Association. The Patman Bill was introduced in the House of Representatives on June 11th, 1935. It survived the assault of the Mapes Bill in the House, encountered the Senate's Robinson, Borah and Van Nuys Bills and emerged from conference in its present form. It would serve only to confuse were I to read the law with its "Provideds" and "Provided Furthers." Let us, instead, separate the wheat from the chaff.

The law contains four sections: The first, and most important, the civil anti-discrimination section, with its provisos and subsections. The second, which we will disregard, a provision for orders issued, or rights of action or proceedings in existence at the time of the law's enactment. The third, the criminal section, we will later examine. The fourth, which we will disregard, grants an exemption to cooperative associations.

Before going into the Act, and its probable meaning, there are several matters of general application and, I trust, interest, which should be considered. As to the law's constitutionality,—it is my opinion that nothing contained will invalidate the Act as a whole. Even if the Supreme Court should find that there is only one meaning which can be given to a certain provision, and as a result of that meaning that the provision is unconstitutional,—only that particular provision will fall. The Act is separable, i.e., its provisions are not

so interrelated that the destruction of a part will vitiate the whole.

Next; we should examine some of the factors which will be considered in interpreting the law. (1) The Act can only be applied in regulation of interstate commerce. Intrastate transactions are not covered. (2) The Law was sponsored by independent wholesalers and retailers. Congress intended to afford small independents competitive equality with large-scale buyers. (3) The interpretation will look toward the attainment of objectives which are constitutional. These objectives have to a large extent already been defined by decided cases. (4) The "rule of reason" laid down in the Standard Oil Case in 1911 will apply. This assures us that the courts will seek a reasonable meaning. (5) Governmental policy toward consumers is important. Such concepts always have a perceptible effect on statutory interpretation. (6) The criminal provision will be strictly construed in favor of the accused.

Let us examine now Section 1(a) of the new law, which becomes Section 2(a) of the Clayton Act. It prohibits "discrimination in price." What does this phrase mean? Representative Utterback explained "discrimination" as follows:

"In its meaning as simple English a discrimination is more than a mere difference. Underlying the meaning of the word is the idea that some relationship exists between the parties to the discrimination which entitles them to equal treatment, where-

* Address before 23rd mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 8, 1937.

by the difference granted to one casts some burden or disadvantage upon the other. If the two are competing in the resale of the goods concerned, that relationship exists. * * * (Cong. R., p. 9559)

Judge Utterback is undoubtedly right in the fact that a relationship must exist between purchasers in order for a difference in price to amount to a discrimination. But Mr. Utterback continued his explanation by saying:

"Where, also, the price to one is so low as to involve a sacrifice of some part of the seller's necessary costs and profit as applied to that business, it leaves that deficit inevitably to be made up in higher prices to his other customers; and there, too, a relationship may exist upon which to base the charge of discrimination."

I think this statement can be compared to a father's prophecy that his son is going to be President . . . and has about an equal chance of proving true! All differing prices, some of which are not otherwise outlawed by the Act, would run afoul of this interpretation. The process of adjusting costs and profits must necessarily reflect a differential, however small. Here, I think, the Courts would refuse to accept this interpretation in order to avoid reaching absurd results.

Next, let us look at the word "price." It seems logical that the Act intends this word to mean net price after discounts and similar allowances. The law is inapplicable to terms of sale except as they amount in effect to indirect discriminations in price. The history of the legislation indicates that the word "price" is not to be defined as an indirect method of prohibiting the use of basing points or delivered prices.

Moreover, it has to be a case of discrimination where "the effect may be":

(1) Substantially to lessen competition;

(2) To tend to create a monopoly, or

(3) To injure, destroy or prevent competition with any person who either grants or knowingly receives the benefit of such discrimination, or with customers of either of them.

These limitations were undoubtedly placed into the law to avoid the ruling in the Fairmont Creamery case decided by the Supreme Court in 1927. Without the limitations, the law would be unconstitutional.

The first two phrases mentioned, "substantially to lessen competition" and "to tend to create a monopoly" are very familiar to the anti-trust laws. They were present in the section of the Clayton Act which this new law displaces. There is no new hazard because of this language.

THE third limitation, "To injure, destroy or prevent competition with any person who either grants or knowingly receives the benefits of such discrimination, or with customers of either of them" is, in the vernacular, the "guts" of this new law. This is the language with which the sponsors of the Robinson-Patman Act intend to work the magic. I believe Courts are going to be reluctant to hold that a slight competitive disadvantage among a few retailers in the matter of price fulfills the requirements. The facts in each particular case will govern and the Courts will, in time, set up some sort of rule which industry can follow. But I want to notify you that the word "injury" cannot be given too broad an application without running into constitutional difficulties. Moreover, any sort of competition injures a competitor in one sense . . . and the broad philosophy of the anti-trust laws is to stimulate not retard competition.

There is one point which deserves comment. Remember that the phrase "or to injure, destroy or to prevent competition" applies in the case of the recipient of the discrimination only to those who "knowingly" receive the benefits of such

discrimination. Therefore, it would seem that if Mr. "A," a wholesaler does not *know* he is receiving the benefits of such discrimination, the fact that the discrimination tends to injure, destroy or prevent competition with other competing wholesalers would not be enough to render "A" liable. The granter of the discrimination, however, is presumed to know what he is doing.

The last phrase, "or with customers of either of them," has caused a great deal of confusion. I believe the authors of the Act intended this to be another protection to the customer of a wholesaler who was competing with a chain store. However, it is a useless protection because if the chain only gets a justifiable difference in price based on the cost of manufacture sale or delivery, the Act would not be violated. If we also realize that the man who grants a discrimination to the wholesaler can have no control over the discount price at which the wholesaler in turn sells to retailers, it seems logical to believe that this enigmatic phrase will eventually pass from practical consideration. It is one of those provisions which are often written into a law in an excess of zeal.

The first proviso to Section 2(a) of the Act excuses a discrimination when the difference in price makes "only due allowance for differences in the cost of manufacture, sale, or delivery resulting from the differing methods or quantities in which such commodities are to such purchasers sold or delivered." This provision has been too often discussed and is too well understood to require any explanation here. Realistic thinking is the key to compliance. It will take the figures of an accountant and not the eloquence of a lawyer under this first proviso.

The second proviso of Section 2(a) of the Act allows the Federal Trade Commission, after due investigation and hearing, to establish quantity limits where it finds that available purchasers of greater quantities are so few as to render differentials on account thereof unjustly discriminatory or promotive of monopoly in

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any line of commerce. To illustrate with a spectacular example, if some huge chain store were the only possible purchaser of a 10,000 gross order of a certain commodity, and if the method of sale, production and delivery of this 10,000 gross order would justify a substantial reduction in price, the result might be unjustly discriminatory and promotive of monopoly. Under this proviso advantage of the difference in quantity would not be allowed to the chain purchaser. In my opinion, this "ceiling discount" provision as it is often called is constitutional.

The third proviso of Section 2(a) is clear. It provides that nothing contained in the section shall prevent persons from selecting their own customers "in bona fide transactions and not in restraint of trade."

The last proviso of Section 2(a) reads as follows:

"That nothing contained herein shall prevent price changes from time to time where in response to changing conditions affecting the market for or the marketability of the goods concerned, such as but not limited to actual or imminent deterioration of perishable goods, obsolescence of seasonal goods, distress sales under court process, or sales in good faith in discontinuance of the goods concerned."

The thing to remember about this last proviso is that other cases than those given as illustrations come within its terms. If that were not true, Section 2(a) might be declared unconstitutional. In my opinion this proviso has an important bearing on the question of lowering prices to meet competition which point I will discuss later.

SECTION 2(b) of the Act applies solely to Federal Trade Commission proceedings. It provides that if the Commission proves that there has been a discrimination in price or services or facilities furnished, a *prima facie* case is established and the burden of rebutting this case by showing justification is upon the person charged

with the violation. It further provides that unless justification is affirmatively shown, the Commission is authorized to issue an order terminating the discrimination.

This is one of the sections in the Act where previously decided cases construing similar situations are going to determine the interpretation. Unless the Supreme Court absolutely reverses itself this language cannot be interpreted according to its literal meaning. The method of saving the constitutionality is to construe this language as not meaning to create a presumption, which has to be overcome by proof; but to construe the language as meaning that an inference of fact is created which will vanish when opposing evidence is introduced. It is obvious that this, for all practical purposes, will render the language meaningless.

Section 2(b) further provides that a seller may rebut the "*prima facie* case thus made" by showing that the lower price granted or the services or facilities rendered were extended in good faith to meet competitive conditions. This applies only to a proceeding before the Federal Trade Commission and not to court actions.

Subsections (c), (d) and (e) of Section 2 can very well be discussed together. Subsection (c) prohibits the payment or reception of a commission, brokerage or other compensation or any allowance or discount except for services rendered. Example: fictitious brokerage. Subsection (d) prohibits payment for services or facilities furnished unless such payment is available on proportionately equal terms to all other competing customers. Examples: advertising allowances, push money. Subsection (e) prohibits discrimination among purchasers of a commodity bought for resale by furnishing or by contributing to the furnishing of services or facilities unless upon proportionately equal terms accorded to all purchasers. Example: demonstrators.

The important thing to remember about these three subsections is that in order to be constitutional, in

the light of decided cases, it would seem that they have to be interpreted as instances of discrimination and subject to the limitations pointed out in connection with Section 2(a). That is, the result of violating any of these three subsections must be to substantially lessen competition, tend to create a monopoly, or injure, destroy or prevent competition before the violation is actionable.

Subsection (d) provides that payments for services or facilities furnished must be made *available* to all competitors on proportionately equal terms; whereas, subsection (e) provides that services and facilities must be *accorded* to all purchasers on proportionately equal terms. It is my opinion that "accorded" and "available" are going to be treated synonymously, but it is anyone's guess if and how much manufacturers will have to publicize their offers.

What is meant by the phrase "proportionately equal terms"? This has probably been the subject of more discussion than any other phrase in the Act. The discussion to date has generated much heat but no light. My best advice to a manufacturer who is worried about this clause is to adopt a reasonable policy in an honest attempt to conform to the spirit of the law and I think he will receive good treatment at the hands of the Courts.

Section 2(f) is new to the theory of trade practice laws. It makes it unlawful for a person knowingly to induce or receive a discrimination in price which is prohibited by this section. Manufacturers can profit by adopting this subsection as a reason for declining certain chain store proposals. Use Dale Carnegie's tactics and convince the chain store that it is really not for its best interest to receive the discrimination.

This completes the civil anti-discrimination section. It is the only section of the law under which proceedings have been begun. The Federal Trade Commission to date has issued twenty-one complaints. One case which was started in March, 1937, against the Procon Service Company, Inc., and eleven other



THE FASTEST WAY TO MARKET



The Yankee Clippers were fast ships. They got to market quicker than any other ship of the time.

Among the valuable products they hauled from the Orient in the old days were crude drugs used as deodorants and insecticides. But with all the clippers' speed, wind as a motive power was unreliable. It made the importation of these materials expensive and consequently limited in use.

Times change . . . and just as steam superseded sail, new chemicals replaced the use of older forms of moth killers and deodorants. Today, Para-dichlorobenzene, like the steamship, is the sure, fast, profitable way to your market.

Solvay Para-dichlorobenzene is manufactured in America. Its supply, as a chemical derivative, is certain. It takes but a few days from the time it is made at the Solvay plant, until it is available on the market under your own label. In transparent packaging, glass jars, patent cans, and treated with attractive colors and perfumes, it reaches your market quickly and brings fast profits!

Solvay Para-dichlorobenzene is supplied in carefully graded sizes (fine, medium, coarse and super-coarse crystals, and for block manufacture). Return the coupon below for full information.

SOLVAY TRADE MARK REG. U. S. PAT. OFF. **PARA-DICHLOROBENZENE**

SOLVAY SALES CORPORATION
40 Rector Street, New York

Gentlemen: Please send me complete information on Solvay Para-dichlorobenzene.

Name.....
Address.....
City.....State.....Dept. AJ

respondents, was dismissed in May, 1937, when the Commission was assured that the violation had ceased. Fourteen complaints charged a violation of the provision allowing only justifiable price differentials. Five complaints charged that a fictitious or false brokerage was being granted or received. Seven complaints charged that demonstrators were being furnished to certain favored customers. In one case it was charged that a buyer knowingly received a discrimination. Discriminatory advertising allowances were charged in five of these proceedings; and in two complaints, the practice of paying push money to employees of certain customers were cited.

I have mentioned these particular subjects of complaint because I think it is illuminating to see what phases of the Act the Federal Trade Commission is seeking to enforce.

LET us now look at some of the most frequently-discussed questions arising under the law: Can "higgling," "haggling," or "auction selling" as it is variously called, be continued? This is the sales method, as some of you know, whereby a salesman is given a base price and allowed a percentage of everything over that price he can get from the customer. Speaking broadly, we must regard this as a dead letter in interstate merchandising. Suppose salesmen were auction selling hospitals. It is hard to believe that a Court would ever say that hospitals are competing, in such a sense that if one is buying a disinfectant or an insecticide at a lower price than another hospital in the same City that competition between the hospitals would be injured, prevented or destroyed. However, that is not the sole test. Is competition among the manufacturers thereby substantially lessened, or does the practice tend to promote a monopoly? The answer can only come from a complete knowledge of the particular facts.

Some members of this Association sell both in package and in bulk. The price per gallon may vary widely according to the form in which

the product is sold. So much has already been said since the passage of this law in trade papers and discussions, to the effect that the only justifiable differentials are those which only make due allowance for difference in cost of manufacture, sale or delivery that any further discussion would be useless. Even at the expense of repetition, however, let me warn those of you who have not looked into this question of differentials that you should do so, and promptly. And again let me state that in order to be safe you have to have facts and figures available.

Are functional discounts abolished? That is, does one have to sell to a retailer at the same price he sells to a wholesaler? The better view is that functional differentials are not abolished. They were in terms permitted by the Act at one stage of its history, but the provision was deleted. I believe the deletion is explained by the fact that the draftsmen of the law believed that it was not necessary to permit functional discounts in terms. If you will recall the provision that the discrimination must be between competitors, you have the answer. Wholesalers and retailers do not compete. Furthermore, we should remember that it was the wholesale grocers who sponsored this particular law. But functional discounts do not have to be granted. A one-price-to-all policy seems proper under the Act.

Can prices differ in different markets? I believe, subject to the limitations to be discussed, that they can. Remember again, the necessity for a relationship among the recipients of a discrimination. It is obvious that a competitive relationship does not exist between a retailer in St. Louis and a retailer in New York. The question may present a serious problem, however, where a product is really thoroughly distributed. Take the case of aspirin, for example, which is sold in drug stores, grocery stores, and even filling stations, throughout the parts of the country. In those places where it can honestly be said that every potential customer lives between two competing outlets a genuine problem faces the manu-

facturer. Until the law is further clarified, certainly the safest course in such a situation is a rigidly standard price scale.

Can manufacturers lower prices to meet competition? They can meet competitive prices and allowances and furnish equal facilities in the market where the competitor is at work. I use the word "meet" because it is not permissible to go below. When we were discussing Section 2(b) I pointed out that the justification of meeting competition which is accorded by the terms of Section 2(b) only applies to the proceedings before the Federal Trade Commission. This is true but in my opinion another section of the Act allows a manufacturer to meet competitive terms. That is the last proviso of Section 2(a) which states that "nothing herein contained shall prevent price changes from time to time * * * in response to changing conditions affecting the market for or the marketability of the goods concerned."

Can a manufacturer merchandise two products of like grade and quality at different prices? If a manufacturer has a well-established cost accounting system, it may be possible to justify a higher price for a trademarked, widely advertised item than for a "no name product" of like grade and quality. The question here is,—will the court construe advertising expense as part of the cost of sale? Government accountants would say "no," and any merchandising man would say "yes." There are good arguments on both sides.

Are contracts which were in existence prior to June 19th, 1936, invalidated by the Act? The argument that they will not be invalidated is based on the fact that a statute should not be construed retroactively when property rights are involved. I believe the more correct argument is based on the fact that a discrimination is a relationship between two or more prices. The relationship comes into being not at the time of the first contract but at the time of the second. Thus, if the second contract is entered into subsequent to the passage of the

A Market for SOAPS SANITARY PRODUCTS SANITARY ACCESSORIES

Because SOAP thoroughly covers the entire soap, sanitary products and chemical specialty fields, including janitor supply houses as well as manufacturers, the magazine is a market place for all kinds of bulk and private brand products and sanitary accessories. Whether you sell soap bases, finished bulk or private brand soaps of any kind, disinfectants, insecticides, floor or moth products, mops, brushes, floor machines or, in fact, anything in this line that is handled on a jobbing basis, SOAP is the magazine to use for advertising.

Look on page 148 for a complete list of firms advertising bulk products. Most of these advertisers have been using space for several years. In a good many instances they are now using considerably more advertising than they were at the start. What better recommendation as a result getter could SOAP possibly have? As for sanitary accessories—the same firms buy mops, brushes, floor machines, etc., as buy bulk and private brand products for resale.

If you are in position to handle business of this type why not get full information about what SOAP has done for others in the bulk field? Remember—even manufacturers buy bulk and private brand products because few concerns interested in marketing a complete line have facilities for making everything in their own plants. Add to this the requirements of the regular janitor supply industry and you have something worth making a special effort to get.

***Advertising Department, SOAP
254 W. 31st St. New York City***

law the discrimination occurs subsequent to the passage of the law and no question of retroactivity is involved. It is generally agreed that contracts for future deliveries may quote different prices than spot contracts. "Free goods" really amount to discounts, and if given, must be given to all on the same basis.

These are the most frequently discussed problems. There are, of course, many questions which arise under the civil section that I have not touched on because of lack of time.

With respect to this section of the Act, I have mentioned earlier that it amends and supplants old Section 2 of the Clayton Act.

There are five types of action which may be brought for a violation:

1. A proceeding by the Federal Trade Commission which results in a cease and desist order.
2. A civil action at common law by persons injured for damages.
3. An action by an injured party under the Statute for triple damages.
4. A suit for an injunction by an injured competitor.
5. A suit for an injunction brought by the Attorney General on behalf of the United States.

A violation of Section 2 of the Clayton Act does not render the transgressor liable to criminal prosecution.

WE now come to Section 3 of the Robinson-Patman Act. This section was originally the Borah-Van Nuys Bill. It does not provide a penalty for violations of the civil section. Rather it is a separate law carrying its own definition of the crime. The section is divisible into three clauses.

The important things to remember about the first clause are: The person charged must *know* of the discrimination; the discrimination must be against competitors of the purchaser (not the seller); discriminations by different prices, i.e., multiple price lists, are not forbidden . . . the crime consists in giving discriminatory discounts, rebates, allowances or advertising service charges;

the word "available" will receive a narrow definition; the prosecutor will have to prove a practically simultaneous sale to competing purchasers at different prices; and lastly, sales must be of goods of like grade, quality and quantity. Undoubtedly, many offenses under the civil section will not constitute crimes under the above language.

The second clause of Section 3 provides that it shall be unlawful for any person to sell goods in any part of the United States at prices lower than those exacted elsewhere in the United States for the purposes of destroying competition or eliminating a competitor. The substance of this clause, prohibiting local price cutting, was contained in the Clayton Act. The difficulty of enforcement has always been and will continue to be proof of motive, i.e., proof that the purpose was to destroy competition or eliminate a competitor.

The last clause prohibits the selling of goods "at unreasonably low prices" for the purpose of destroying competition or eliminating a competitor. What is an unreasonably low price? Is it a price below a reasonable profit, or is it a price below cost? Having regard to the fact that the prosecutor will have to prove not only that the price is unreasonably low but that the purpose is to destroy competition or eliminate a competitor, it will be seen that a difficult task lies before the District Attorney. This clause might be held unconstitutional because of the vagueness of the phrase "unreasonably low prices."

Violation of any of these three clauses is made a misdemeanor punishable by fine of \$5,000, imprisonment for one year, or both. But any businessman who stays within the confines of sensible competition has very little to fear from the criminal section.

In concluding this discussion of the Robinson-Patman Act I would like to emphasize that it is a law of realities. Problems under it more often involve questions of fact than questions of law. Its provisions cannot be escaped by wishful thinking.

The best rule for a manufacturer to follow is to bear in mind the purposes of the Act and ask himself the straight-forward question: Am I seeking to do something which contravenes its intention? Be fair with yourself and lay the facts on the table. A policy of not letting your left hand know what your right hand is doing is likely to prove very disastrous.

It is a law, and any law is a serious law. The danger of triple damage actions by persons injured is always present. What may seem to be a simple Federal Trade Commission proceeding leading only to a cease and desist order may blaze the trail for damage suits by persons injured. In the case of most manufacturers in this Association, because of the very nature of their products and the size of their business from individual wholesalers and retailers, perhaps judgments would not be so very large in actions brought by injured wholesalers or retailers. However, the size of the judgment might be something to worry about in the case of a competing manufacturer who is injured by your practices. I therefore warn you again not to disregard this Act and not to solace yourselves with the thought: "It will be a long time before they get around to hopping on us." It is much better to be safe than sorry.

AND now just a few words about the State Fair Trade Acts: California is the birthplace of this type statute, and the retail druggists are largely responsible for it. We know the purpose of the statute is allegedly to enable the protection of trade-marks by price maintenance. Broadly speaking, there are two types of laws. One is usually called the California type statute which allows any owner of the goods to enter into resale price maintenance contracts. The other is the so-called N.A.R.D. type which provides that the initial setting of prices must be made by the trade-mark owner or his duly authorized agent. The second type statute is the more modern and

(Turn to Page 121)

Thanks to you...

A NEW GALLONAGE RECORD!

Improved Pyrocide 20
outsells all
Pyrethrum concentrates
we have ever offered



YOU were quick to see the great possibilities of Improved Pyrocide 20. Since we placed this better insecticide base on the market a year ago, your orders have flowed in. And would have swamped us had not our plant capacity been 12 times greater than when we originally introduced Pyrocide 20 eight years ago.

This month, as the season draws to a close, we hang up a new gallonage record here at pyrethrum headquarters. We're pretty happy about it, too, because it means the industry has endorsed Improved Pyrocide 20 perfected after two years of patient work in the lab-

oratory and in the field . . . two years spent in developing the finest killing agent ever offered manufacturers of household insecticides.

CHECK THESE ADVANTAGES

Improved Pyrocide 20 dilutes clear with any deodorized base oil. When diluted it will not stain fabrics. Its killing power is assured by the guaranteed pyrethrin content of 2 grams per 100 c.c. Its odor has been greatly reduced, thus cutting perfume costs one-half to one-third.

If you need a pyrethrum concentrate with minimum taste and practically odorless, except for the aroma of pyrethrum flowers, get Improved ODORLESS Pyrocide 20, selling for only 15c a gallon more than Improved Pyrocide 20. Its pyrethrin content is the same.

"When it's from McLaughlin's, it's tested!"

McLaughlin Gormley King Company

MANUFACTURING CHEMISTS • MINNEAPOLIS, MINNESOTA



Consumer Sales Education on INSECTICIDES

By H. A. Thomas*

Shell Petroleum Corp.

IT is generally agreed that the small consumer and large commercial user is better acquainted with insecticide today than was true several years ago. However, further education of the buying and consuming public will be necessary before the progress made by the association is known to all concerned. In this regard we, as members of the industry, must constantly improve our products, more accurately present them to the trade, improve our packages so as to present our products in the same form as when they were packaged, and last, but not least, avoid any attempt at over-selling and over-stating each insecticide item over that of its actual functional capacities.

Household and Livestock Sprays

Household sprays and livestock sprays make up the major volume of insecticide sales of the packaged variety.

Household sprays, due to the nature of recent and modern tests are generally classified with regard to the capacities of the individual product as follows:

1. Knock down—10 minutes
2. Kill—End of 24 hour period
3. Stainless or otherwise
4. Odorless or otherwise

While this manner of classification is generally known to the industry, it is not universally known by the trade, and a recent survey through visits to a large portion of the United States reveals that large commercial

users and the small consumers are still hazy as to what should be expected of a modern household fly spray. Quite often these same people are of the opinion that household sprays and livestock sprays are the same products, and that manufacturers who sell both lines are merely rebranding a singular insecticide.

Livestock sprays of modern design are usually judged on their functional capacities as follows:

1. Degree of repellency out in the open—How Long—One spraying
2. Non-irritating qualities to livestock under varying climatic conditions throughout area distributed.
3. Killing ability—and effect of insect fertility to all insects subjected to such a spray.

Sales Education Needed

The story of these functional differences, for both household and livestock spray, could best be carried to the public through use of association bulletins. These bulletins should be prepared and offered to the membership on a nominal purchase arrangement for those who desire to distribute them to their own trade. The official sanction of the national association to the products distributed by the respective members would be obviously displayed through the use of these bulletins, and each member distributing this material would secure favorable publicity, as being associated with so representative a group.

The information contained in the bulletins would be accepted by the public as authentic, and this pub-

licity would gradually serve to encourage the buying public to accept *only those products* which definitely coincide with the specifications set by the association, and as outlined in these bulletins. At present there are still a large majority of volume buyers who wish to set their own specifications for household sprays and livestock sprays. This is apparent when invitations for bids are distributed, and this practice is usually the result of lack of sufficient knowledge about these products.

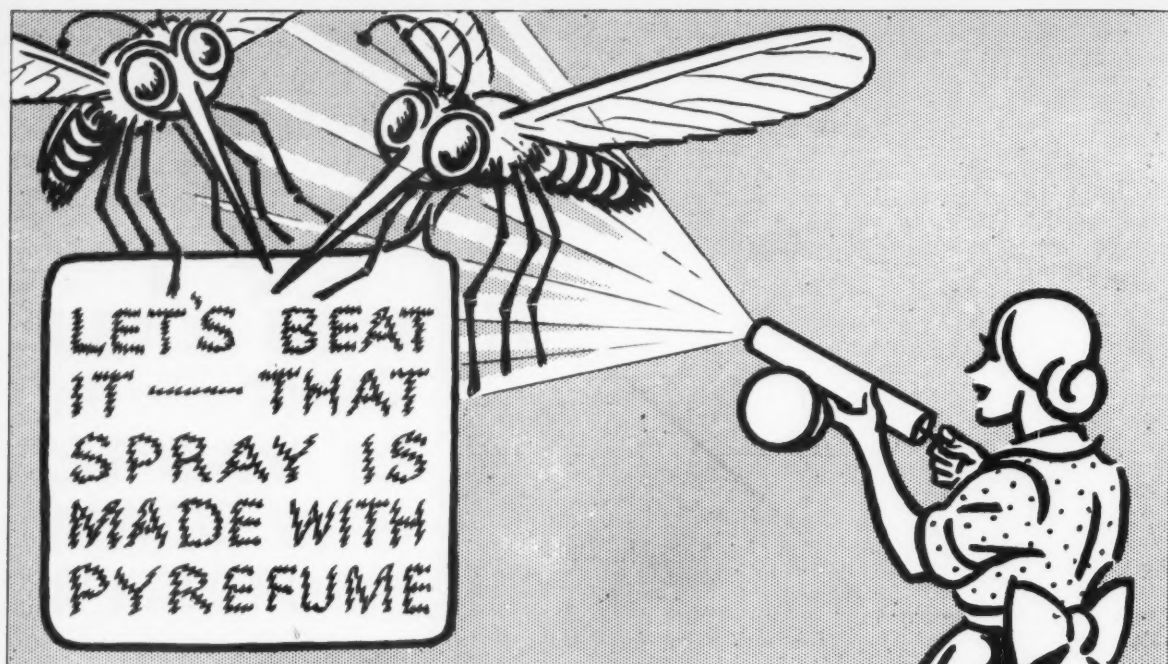
In the proposed bulletins the previously adopted schedule of grades for household sprays, presented at the December, 1936, meeting, could be included, along with descriptive drawings and recommendations for the product's use. Further information regarding the application of both type sprays could be included. Particular stress should be given to the proper way to use household sprays in the home, etc. This could be tied in with the table of grades. This grade table should carry a code of the knock down and kill opposite the various grades tabulated, starting from "AA to D," as presented at the last semi-annual meeting.

Over-Selling Should Be Avoided

With the voluminous product capacity information now available, all of which is known by all members who operate Peet-Grady test chambers, it seems appropos that the association membership should

(Turn to Page 121)

*Address before Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 8, 1937.



FOR A MORE EFFECTIVE
INSECTICIDE *use*

PYREFUME

THE PERFECTED PYRETHRUM CONCENTRATE

SUPER 20 • SUPER 30

Scientific precision—constant laboratory control—years of experience—exceptionally complete facilities . . . these are the factors which go to make PYREFUME an insecticide of high toxicity and uniform killing power.

Leading laboratories in this country and abroad confirm the accuracy of the Tattersfield-Seil method followed by our laboratories in the evaluation of Pyrethrins in Pyrethrum Flowers.

Call on us for technical data on all types of insecticides.

Not satisfied, however, with merely "calculating" the Pyrethrins content of the extract from this assay of the flowers, we also test the extract itself by an exclusive process which enables us to guarantee a Pyrethrins content of 2 grams per 100 cc. in PYREFUME SUPER 20 and 3 grams per 100 cc. in PYREFUME SUPER 30. In addition, the toxicity of PYREFUME is tested physiologically in our own Peet-Grady chambers.

S. B. PENICK & COMPANY

132 NASSAU STREET, NEW YORK

1228 WEST KINZIE STREET, CHICAGO

REPRESENTATIVES ALL OVER THE WORLD

Insecticide Sales Problems

By H. W. Moburg*

Rex Research Corp.

THE problems which confront all manufacturers in marketing an insecticide are undoubtedly very much alike, but the methods used by each manufacturer in solving these various problems, no doubt, differ greatly. The purpose of this paper is to call attention to some of these sales problems which affect, or in some way enter into the sale of insecticides, so that they may be discussed freely from the floor for the benefit of all interested members.

Not knowing the methods used by other insecticide manufacturers, I am compelled to refer to some of our own experiences in employing and handling salesmen, in order to bring out some problems which we have had to deal with.

The first problem in building a sales force is to locate capable men who have had sufficient selling experience to be given a trial, and we have not found this an easy matter, especially during the past year or two. I venture to say that many of you have also found this same condition existing.

There are, of course, numerous ways and means of obtaining salesmen—some good and others not. One of the most undesirable practices we have found used by some few manufacturers, and one which I feel the entire industry should oppose, is the attempting to employ, or the employing of competitors' salesmen.

If a manufacturer attempts to employ a salesman representing one of his competitors, it is only natural a better offer will have to be made the salesman if he is to give it any consideration. If the salesman has

proven to be a good business-getter his old employer will naturally want to retain him and will meet the increase in salary which the salesman will, no doubt, demand. The outcome will be that the salesman is the only one who has gained anything.

Should we school our salesmen on their sales talk so that they use constructive selling methods which will be beneficial to the entire industry, or permit our salesmen to use unethical means to obtain orders and make meaningless claims, such as "we use 100 per cent more pyrethrum," "our product is 100 per cent stronger," etc.

Is a high pressure salesman an asset or liability to an insecticide manufacturer?

Should we acknowledge our salesmen's retail orders as a protection for ourselves, as well as for the retailer and wholesaler, or take it for granted that all orders are bonafide orders?

Should we consign or guarantee the sale of merchandise to the retailer and wholesaler?

Should we pay transportation to the wholesaler for allowing our salesmen to travel with their men?

Are there any methods known which will assure the manufacturer of getting the wholesaler to make delivery of bonafide retail orders?

Are we operating within the law if we quote different prices on the same product and in the same quantities to various state and government institutions?

Should we encourage or discourage the private label business?

In conclusion permit me to congratulate the industry as a whole on its high standards of doing busi-

ness and state that I feel the association meetings are playing a big part in bringing about more favorable conditions in the industry.

Official Registration

(From Page 93)

Furst-McNess Co.—Charles W. Furst
General Chemical Products Co.,
David C. Feldman
General Laboratories Co.,
William A. Hadfield
General Naval Stores Co.—P. E. Calo
General Naval Stores Co.,
W. H. McArdle
Givaudan-Delawanna Inc.,
Dudley F. Lum, Eric C. Kunz,
R. M. Stevenson
Gulf Oil Corporation,
Dr. W. A. Simanton, Wallace
Thomas
B. Heller & Company,
Preston B. Heller
Hercules Powder Co.—G. F. Hogg,
E. T. Wilander, Ben. M. Slicing,
George C. O'Brien, B. H. Little,
Paul Mayfield, Friar Thompson, Jr.
Dr. Hess & Clark—H. M. Clark
R. Hillier Corporation,
R. C. Jennings
Hirschberg Brothers,
Elmer Hirschberg
J. I. Holcomb Mfg. Co.,
Lawrence Newburn
Hooker Electrochemical Co.,
Eugene McCauliff
H. D. Hudson Mfg. Co.,
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Paul F. Loris
Huntington Laboratories Inc.,
J. L. Brenn, C. A. Seguin
Inland Tar Co.—Arthur Engh
Iron Range Chemical Co.,
Louis S. Stein
Kling Exterminating Co.,
Otto R. Kling
Koppers Products Co. Inc.,
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Lambert Pharmacal Co.,
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Lanair Company—Henry H. Fisher,
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Lowell Metal Products Co.,
C. A. Hall, Frank M. Newall,
George A. Arehart
MacNair-Dorland Inc.,
Grant Dorland, Ira P. MacNair,
Tom Morgan

* Address before Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June 8, 1937.

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of many types of materials, including coal, coke, machinery and mechanical devices; a manufacturer of many special products and a distributor of others. Koppers means something to almost every business man, and to all of them it means reliability, dependable products and fair dealing. Use Koppers products.

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Cresol, U.S.P.
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98% to 100%, Straw Color

TAR ACID OILS
NEUTRAL
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PRODUCTS OF THE WHITE TAR COMPANY OF NEW JERSEY, INC.

REFINED NAPHTHALENE
Crushed, Crystals, Powder, Lump, Chips, Flakes. For use in manufacture of deodorizing blocks, moth preventives and other insecticides.
Also Naphthalene in Balls, Blocks, Tablets.

COAL TAR DISINFECTANTS
Co-efficients 2 to 20 plus, F.D.A. Method
CRESOL AND CRESYLIC DISINFECTANTS

PINE OIL DEODORANTS
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Pressed Naphthalene or Paradichlorobenzene. Various sizes and shapes, Perfumed and plain. Bulk industrial packages, retail packages.

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Toluol (Industrial and Nitration)
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Tanks and Tank Work
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 Mellon Institute—O. F. Hedenburg
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 Malcolm McKenzie
 National Can Co.—J. H. DeLacy,
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 liam R. Janney
 National Sanitary Supply Assn.,
 E. C. Kratsch
 Niagara Alkali Co.—William J. Weed
 Nowak Milling Corporation,
 Victor J. Garvin, Cass F. Smith
 O'Connor & Kremp—J. O'Connor
 Owens-Illinois Glass Co.,
 C. M. Roper
 S. B. Penick & Co.—Carl M. Black,
 Ralph A. Olson, Douglas P. Camp-
 bell, William J. Finlay, Dr. Thomas
 Lewis, Harold Noble, A. D. Penick,
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 Pennsylvania Refining Co.,
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 John Powell & Co.—H. J. Ahles
 D. W. Lynch, John Powell, Dr. Al-
 fred Weed, Charles G. W. Campbell
 R. J. Prentiss & Co.,
 A. W. Bevernick, H. R. King
 Reilly Tar & Chemical Corp.,
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 sleigh, Jr.
 Rex Research Corporation,
 J. E. Armstrong, H. W. Moburg,
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 Wittmaack
 Rohm & Haas Co. Inc.,
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 Sherwood Petroleum Co.,
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 The Tanglefoot Co.,
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Thorocide Chemical Corp.,
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 Ungerer & Company—E. M. Tysdal
 Uppressit Products Corp.,
 M. C. Samuel, R. T. Cooper, H. H.
 Linnemeyer, Charles Owens
 U. S. Chemical Co.—V. W. Mider
 U. S. Sanitary Specialties Corp.,
 George L. Simmonds
 van Ameringen-Haebler Inc.,
 A. L. van Ameringen
 Vestal Chemical Co.,
 William F. Pollnow
 Vick Chemical Co.—R. K. Hines
 Wackman Welded Ware Co.,
 A. F. Cunningham
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 J. R. Watkins Co.,
 Dr. E. G. Thomssen
 West Disinfecting Co.,
 R. O. Jackson, George Westberg
 Robert C. White Co.,
 Robert C. White, Robert C. White,
 Jr.
 White Tar Co. of N. J. Inc.
 H. W. Hamilton, L. A. Merrill
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 J. C. Skinner, F. B. Twigg
 Allan B. Wrisley Co.,
 George A. Wrisley
 John H. Wright
 Zonite Products Corp.,
 Dr. M. G. Minaeff
 Zoro Company—Frank Curran

Guests

Dr. F. L. Campbell, Ohio State Univer-
 sity, Columbus, O.; Dr. J. J. Da-
 vis, Purdue University, Lafayette,
 Ind.; Dr. Howard W. Haggard, Pro-
 fessor of Applied Physiology, Yale
 University, New Haven, Conn.; Dr.
 Herbert H. Harris, Entomologist,
 Madison, Wis.; Mr. R. Jenkins, U. S.
 Department of Agriculture, Food &
 Drug Administration, Chicago, Ill.;
 Mr. F. W. Reynolds, National Bureau
 of Standards Department of Com-
 merce, Washington, D. C.; Dr. R. C.
 Roark, U. S. Department of Agricul-
 ture, Department of Entomology &
 Plant Quarantine, Washington, D. C.
 E. N. Woodbury, Ohio State Univer-
 sity, Columbus, Ohio.

Disinfectants for Fruit Trees

(From Page 102)

interesting work of Stanley and his
 associates of the Tennessee Experiment
 Station has shown that crude wood
 creosote oil, used in sufficient quan-
 tity in an emulsifiable form, was
 highly toxic to peach leaf curl. Too
 little is known of the fungicidal ac-
 tion, if any, of coal-tar preparations
 to warrant final statements.

It may truly be said that our
 present knowledge of coal-tar dis-
 infectants in the role of insecticidal
 and fungicidal agents is still in a
 period of infancy. Further studies
 need to be made to determine their
 chemical and physical compatibilities
 when used in combination with other
 insecticidal or fungicidal materials.

Then too, there remains the problem
 of standardization of materials so
 that intelligent orchardists will have
 an opportunity to select products best
 fitted to meet their particular con-
 ditions.

Disinfectant Developments

(From Page 105)

claimed by Delson (27) to be highly
 germicidal, non-poisonous, and suit-
 able for use on the skin. It is formed
 by heating glycerin and sulfur under
 pressure.

Schmelkes and Marks (28)
 make disinfectant solutions of an
 organic N-chlorocompound contain-
 ing available chlorine in an ester
 formed by esterifying an alcohol of
 the group, glycerol, glycol, ethyl
 alcohol, propyl alcohol and butyl
 alcohol with an acid of the group
 consisting of acetic and propionic
 acids.

Products particularly active
 against *Staphylococcus aureus* are
 described by Raiziss and Clemence
 (29) (30), these being alkyl deriva-
 tives of beta and alpha-naphthols
 respectively.

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 2,067,100.
- (15) Harold B. Kimerlin. U. S. Pat.
 2,067,674.
- (16) Parke, Davis & Co. U. S. Pat.
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 2,069,165.
- (18) Morris S. Kharasch. U. S.
 Pat. 2,069,166.
- (19) Merrill G. Hart. U. S. Pat.
 2,070,080.
- (20) Geo. W. Raiziss & Le Roy W.
 Clemence. U. S. Pat. 2,071,939.
- (21) Geo. W. Raiziss & Le Roy W.
 Clemence. U. S. Pat. 2,073,995.

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- (22) Paul Goedrich. U. S. Pat. 2,073,057.
 (23) Joseph B. Niederal. U. S. Pat. 2,073,316.
 (24) Edward L. Helwig. U. S. Pat. 2,067,606.
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 (26) Lucas P. Kyrides. U. S. Pat. 2,067,452.
 (27) John Delson. U. S. Pat. 2,067,261.
 (28) Franz Schmelkes and Henry C. Marks. U. S. Pat. 2,073,256.
 (29) Geo. W. Raiziss & LeRoy W. Clemence. U. S. Pat. 2,073,996.
 (30) Geo. W. Raiziss & LeRoy W. Clemence. U. S. Pat. 2,073,997.

Fair Trade Laws

(From Page 113)

was devised to prevent a possible dilemma. I have reference to the fact that under the earlier type statutes it seems possible for different wholesalers in a state to enter into contracts setting different prices for the same product.

These statutes generally provide for both criminal and civil enforcement. The most usual enforcement, of course, is the injunction against underselling the contract price. According to latest available information, there are forty-one states having laws in effect and bills pending in two states. The Supreme Court, in December of last year, upheld these statutes as far as the civil enforcement was concerned. I emphasize civil enforcement because in my mind there is a doubt as to the constitutionality of the criminal provision.

The most important thing to remember is the fact that prices may only be maintained in intrastate transactions in those states having such laws. The Miller-Tydings Bill was designed to remove the impediment of the Sherman Act, which prohibits price maintenance in interstate commerce. President Roosevelt, however, by command to Congress, stopped this Miller-Tydings Bill dead in its tracks, and at this moment its passage seems unlikely.

This leaves the situation as follows, assuming in each case that the state in question has a Fair Trade Act.—A business which is incorporated in a state may properly maintain prices within the state by appro-

priate activity, i.e., signing and distributing contracts. The better view seems to be that a corporation may do the same thing in states where it is qualified to do business and where it maintains a stock of goods, so that its activities can be considered purely intrastate. In no other situations can a manufacturer safely avail himself of these laws.

A word about the Omnibus Contract in which a wholesaler in a state sets the prices instead of a manufacturer. Prior to the time that the Miller-Tydings Bill went into its induced coma, the Federal Trade Commission had issued a statement which was understood to mean that the Commission was going to manifest little future interest in the matter of price maintenance. Immediately following this statement there was a great deal of activity in connection with Omnibus Contracts. The wholesalers insist that they can still be utilized without the danger of running afoul of the Sherman Act. A manufacturer who is willing to permit Omnibus Contracts today should talk to his own counsel. Assuming certain facts, a wholesaler can employ Omnibus Contracts without danger to the manufacturer of a product.

The purpose of my brief discussion of State Fair Trade Legislation has been to report on the present status of the situation as I see it. And to warn you not to embark boldly on the choppy seas of price maintenance without expert advice in the light of your particular facts.

Insecticide Sales Education

(From Page 115)

give due consideration to the desirability of preparing specific products for specific insecticide control. For example, moth sprays should be classified and sold as moth sprays or moth proofers, especially so if a product is sold and distributed for this singular usage. The same can be said about bed bug sprays and bed bugs proofers, and in short, household sprays which are manufactured and sold as control insecticides for a number of household pests, should restrict their direction panels to

such recommendations for dealing with each insect that will not mislead the consumer.

A current practice of distributing moth bags as premiums along with the sale of fly spray for moth control is entirely satisfactory, provided sufficient practical information and directions are provided to the consumer in order to avoid any misinterpretation of the (product and bag combination) capacity, with regard to fool-proof moth eradication. It is, therefore, recommended that products be prepared and sold under singular brand captions, along with advertising media that will truthfully convey the actual product's capacities and nothing more. In short, overselling of products in the insecticide field should be abolished and when this is done as an industry, the buying public will register its approval through increased purchases.

Odors for Household Spray

During the past two years much development has centered around improvement of base products. Several highly desirable odorless insecticide bases have been developed by reputable manufacturers, and the use of these products in packaged and finished sprays has added much to securing greater consumer acceptance, and has promoted wider use of all household sprays. Odorless bases are usually tasteless, or relatively so, and naturally do not require as much masking perfume as when old type kerosene odor bases are used. More scientific perfume masking of products has resulted, along with the development of odorless bases, and products can now be so balanced that the perfume odor will be dissipated in normal room temperature almost as quickly as the toxic effect of the particular product has disappeared.

This development has made for wider and more general use of products so treated. It has also permitted the repeated daily use in eating establishments, hotels, and hospitals during the day, where, in the past, because of the extreme odor of some sprays, operators of public enterprises were forced to spray only

BREUER'S TORNADO ELECTRIC SPRAYERS
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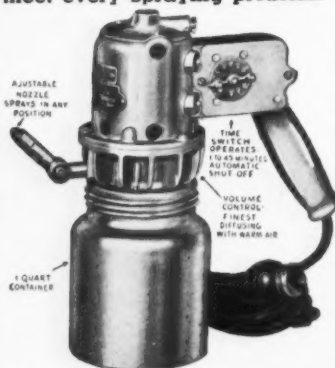
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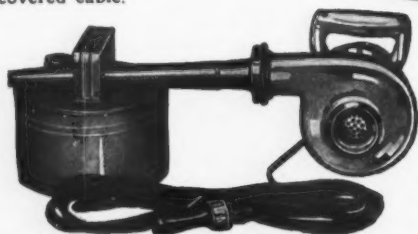


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It features an automatic time switch set at any point from 1 to 30 minutes — sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. **MODEL 53** same as Model 54 except does not have automatic time switch.

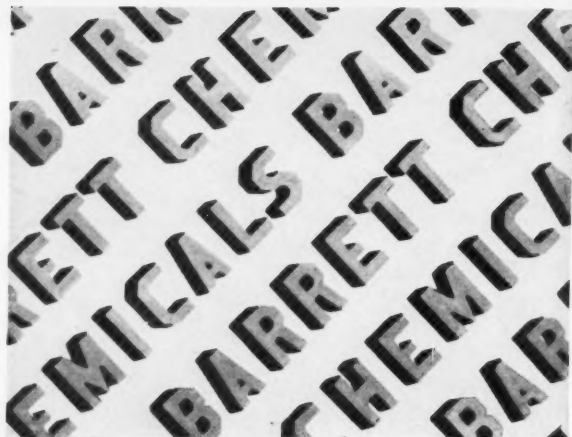
Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8' to 10'. 1/2 H.P. G.E. Universal Motor, 1 pint glass jar. 20' of rubber covered cable.



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in the early morning and the late evening. Quite often sprays with lingering odors have given the consumer an undesirable impression regarding the product's efficiency. After the spray fog in a room has receded to floor level, and the toxic property of the spray has become ineffective, the presence of a spray containing too much perfume will be apparent for several hours. This tells the public that spray had been used in that room, consequently, should flying insects be present, the public is prone to feel that the spray used was unsatisfactory. The average person does not realize that a household spray's active killing capacities are only present during the short period of time that it takes the spray fog to recede from room ceiling to floor level.

This is the type of information that can be conveyed in bulletins to the buying public, and it is generally agreed that educational data of the type herein mentioned is all important and is one of the major problems of the industry. Because of this fact members are urged to see the seriousness of this situation, and to cooperate with the association in the preparation of some logical program that will improve the present viewpoint of the buying public.

Grasselli Transfers McQuade

John H. McQuade has been appointed manager of the Rensselaer, N. Y., branch office of the Grasselli chemicals department of E. I. du Pont de Nemours & Co., succeeding Joseph Krackler. Mr. Krackler has replaced Joseph H. Mulligan at the Boston office. T. S. Nichols has been named assistant manager of the metropolitan New York branch office which is under the active direction of Edward H. Maguire.

Krex Sanitation Moves

The new offices of Krex Sanitation Products, Chicago, are located at 21 E. Van Buren St. This concern, manufacturing sanitary supplies, was formerly located at 910 W. Jackson Blvd.

National Association of Insecticide and Disinfectant Manufacturers



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MEMBERSHIP

Active Membership

All reputable persons, firms or corporations engaged in or allied with the business of manufacturing or distributing disinfectants, antiseptics, germicides, household insecticides, sanitary supplies, and/or articles coming within the purview of the Federal Insecticide Act of 1910 shall be eligible for Active Membership in the manner prescribed in the By-Laws.

Associate Membership

All reputable persons, firms or corporations engaged in the manufacture or distribution of raw materials, containers, packaging machinery, spraying devices or other articles, or services, normally purchased by Active Members of the Association shall be eligible for Associate Membership, to have and enjoy all the privileges of Active Membership but without the right to vote or hold office.

For further details, communicate with

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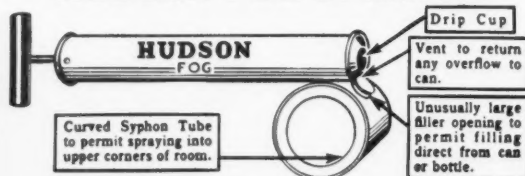
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TECHNICAL NOTES

Fineness of Pyrethrum Powder

The longer the period of grinding to give a finer pyrethrum powder, the greater the rate of paralysis of mosquito larvae and the rate of mortality of the bean aphid. Decrease in particle size results in a greater surface area, which seems to be the determining factor. At the same time, increase in surface area brings about more rapid deterioration of pyrethrins. Tannic acid and titanium oxide both act to deter this deterioration. The tannic acid serves as an antioxidant while the pigment properties of the titanium oxide cause it to reflect or to absorb the light of injurious wave length. The degree of protection afforded does not vary with the fineness of the powder. Tannic acid is not quite as effective as titanium oxide. Charles L. Smith. *J. N. Y. Entomol. Soc.* 44, 317-38.

Determination of Rotenone

Work carried out over a considerable period in connection with regular consignments of derris, timbo, and barbasco roots has led to the conclusion that carbon tetrachloride cannot be relied on to extract rotenone completely. The cold chloroform process is preferable. It gives results higher than any other solvents tried, with the exception of hot ethyl acetate. The latter solvent gave results approximately the same as those with cold chloroform, if pure rotenone were calculated, but the complexes were usually more impure than those obtained by cold chloroform extraction. Most of the results obtained by extraction with trichloroethylene were not far from those obtained with chloroform, although always a little lower, and in two cases decidedly lower.

Cold extraction seems preferable on account of changes that may take place on long heating. Beach's

process is recommended. In view of the results obtained, it is probable that a fair proportion of published results for rotenone are decidedly low.

While it has been customary to report crude rotenone, it would no doubt be more satisfactory if pure rotenone could be reported. For commercial purposes polarization could be used for this. The method recommended, therefore, is to extract with cold chloroform, crystallize from carbon tetrachloride, determine the purity of the complex by polarization, and report percentage of "pure" rotenone in the root. The results in general would probably be only a little higher than those obtained by the use of carbon tetrachloride or trichloroethylene, but the very low results obtained with some samples when carbon tetrachloride is used for extraction would be avoided. It is possible that some other solvent will be preferred on further investigation, but chloroform is the most convenient and reliable tried so far. In any case, it is very desirable that some sort of standard procedure should be adopted. W. M. Seaber. *J. Soc. Chem. Ind.* 56, 168-73T (1937).

Determination of Rotenone

The method of determining rotenone in natural roots by extraction and crystallization from solution in carbon tetrachloride has been shortened. A study of the crystallization process shows that it is retarded by the nonrotenone portion of the extract. Accurate results by this crystallization method were obtained only when the rotenone present was equivalent to at least 4 per cent of the root. Rotenone can be added, if necessary, to bring its content up to this level, or a sufficiently large sample can be taken to bring the amount during crystallization to this value. The method is accurate to

about ± 0.05 per cent. Results for rotenone in the region of 4 per cent should only be quoted to about 0.1 per cent. Howard A. Jones. *Ind. Eng. Chem., Anal. Ed.* 9, 206-10 (1937).

Evaluation of Derris

Derris and mundulea samples can be separately evaluated by determining the amounts of optical constituents in each. This value is obtained by determining the optical rotation of a benzene extract of the plant under standard conditions, and reading off from a curve for pure rotenone the amount of this substance corresponding to the rotation obtained. Two groups of curves are obtained when these values are plotted against toxicity, the munduleas being about 2.8 times as toxic as the derrises with equal contents of optical constituents. R. R. LeGeyt Worsley. *J. Soc. Chem. Ind.* 56, 175-6T (1937).

Wetting & Disinfectant Agents

Quaternary ammonium bases are obtained by causing an alkylene oxide to react in the presence of water with a water-insoluble tertiary amine containing at least 1 radical of at least 8 carbon atoms. The products have foaming and wetting properties and are also useful as disinfectants. I. G. Farbenindustrie A.-G. British Patent No. 459,309; through *Chem. Abs.*

Soap for Liquid Polish

A soap suitable for incorporation in liquid polish to be used for cleaning window glass and metal surfaces is made from olein and ammonium hydroxide. Sulfonated oils may also be used, and some curd soap to regulate the consistency. *Seifensieder-Ztg.* 64, 232 (1937).

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NEWS

Peterman at New Location

William Peterman, Inc., has moved recently to new quarters at Rockefeller Center, New York. The company's former location was at 110 Washington St.

H. R. Woodward Dies

Herbert R. Woodward, president of Allaire, Woodward & Co., of Peoria, Illinois, insecticide materials, died at the St. Francis hospital in Peoria, June 13th. His death was caused by a streptococcic infection after only a week's illness. Mr. Woodward was born in Peoria in 1874. He was graduated from Princeton University in 1897 as a civil engineer. After his graduation he followed his vocation of engineering on the Pacific Coast and became president of Allaire, Woodward & Co. in April, 1917, shortly after the death of his brother, Henry Joseph Woodward. He is survived by his widow, one son, Morrell R. (Pete) Woodward of Painted Post, N. Y., four sisters, Mrs. Samuel Cork and Mrs. Charles Wisner, both of Toronto, Canada, and the Misses Margaret and Elizabeth Woodward, both of Peoria.

Wilbert Expanding Factory

Wilbert Products Co., maker of "No-Rub" floor wax and furniture polish, "No-Rub" shoe white and other products, has announced plans to expand production facilities in its New York plant at 805 East 139th Street. Architects' drawings are now being made for a two-story structure to be erected on a site adjoining the present plant. The top floor of the new building—fire-proofed throughout—will be used exclusively for manufacturing purposes, the finished products being run by pipelines to filling equipment in the main plant. New filling equipment of the latest type is to be installed. This includes one of Pneu-

matic Scales' largest automatic 12-spout vacuum filling machines, a modern 4-head capping machine and front and back labeller, together with a Jones constant-motion cartoning machine. With this new and modern equipment, the plant will be able to produce 120 finished packages per minute. With an eye to further expansion in the future, Wilbert's is also taking title to another building adjoining its property to the west.

Form Sani-Glo Polish Co.

Sani-Glo Polish Co. has recently started operations at 1468 Herkimer St., Brooklyn, manufacturing hand soap solvent, automobile and furniture polish, insecticides, disinfectants, floor waxes, metal polishes, household cleaners, etc. The firm has been incorporated under the laws of New York State for \$10,000. Its officers are: William K. Jacobs, president; Abraham Berman, vice-president, and Irving J. Ellis, secretary and treasurer.

John Glover Dies

John Glover, president of Wizard, Inc., Chicago, which has just been taken over by American Home Products Corp., Jersey City, N. J., died June 19 in the Columbus Memorial Hospital, Chicago, after an operation for appendicitis. He was forty-eight years old and had been connected with the household specialty field since 1922 when he became vice-president and general manager of O'Cedar Corp., in which position he served until 1925.

Exterminators Discuss Fluorides

A program on "Fluorides" was presented at the June 17th meeting of the Professional Exterminators Association held at the Town Hall, New York. The speakers were Dr. William S. Tonry, and Louis

Schlichting of American Fluoride Co. The latter read a paper which had been prepared for the meeting by Dr. Julius Jungmann of American Fluoride Co. Open discussion on the subject of fluorides followed the two talks. It was brought out that the classification of fluorides as poisons is erroneous, since it takes from 75 to 150 grains to be fatal in the case of humans, whereas the law designates poisons as materials "60 grains or less of which are lethal to a grown person".

Zip Leases New Building

Zip Insecticide Co., Milwaukee, has just leased a new building at 838 S. First St. Modern quarters providing 7,200 square feet of floor space are available at the new location.

2nd Pest Control Conference

Purdue University, Lafayette, Ind., will conduct another conference short course for pest control operators during the week of January 17, 1938. Professor J. J. Davis of the Purdue Department of Entomology and his faculty staff will be in charge. Detailed announcements will follow the latter part of the year.

NAEF May Change Name

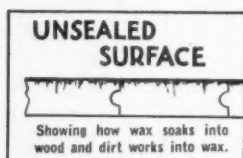
The National Association of Exterminators and Fumigators is currently conducting a mail vote of the membership on a proposal to change the name of the organization to the National Pest Control Association, Inc. To make the change effective it will be necessary for two-thirds of the membership to respond in the affirmative by July 7.

Offer New Wax

Innis, Speiden & Co., New York, are currently offering a new refined wax for use in the production of wax emulsions. It may be used as a substitute for the more costly and higher grades of carnuba, it is stated, as it makes a good light colored emulsion. It dries with a good sheen and polishes well, according to the maker. Available in both lump and flake form.

To Get the **MOST**
From the Use of
Floor Wax—
SEAL Porous Surfaces
with

FEDERAL CHAIN STORE* SEALER



IT PAYS TO SEAL THE SURFACE

When your floor is sealed with Federal Chain Store Sealer, the pores are permanently filled — no dirt penetrates into the pores — your floors retain a handsome, clean appearance—applications of wax stay on the surface.

AN EVEN BRILLIANT FINISH

By giving a wax finish the proper foundation, your floors will be uniform in appearance and have a brilliant surface.

GREATER PERMANENCE — ECONOMY

Floors properly sealed last longer, look better, require far less attention and lower the cost of maintenance.

★ Approved by MAPLE FLOORING MANUFACTURERS ASSOCIATION

Send for **FREE Illustrated Book on
FLOOR FINISHING & MAINTENANCE**

FEDERAL VARNISH COMPANY

Dept. 58 — 331-339 South Peoria Street
CHICAGO ILLINOIS

UNIVERSAL



DOMETOP *Continuous* SPRAYERS



STREAMLINED

Here is a continuous sprayer for household use which tops the sprayer field as the World's Champion. Not only does it lead in appearance and design but it gives outstanding performance unequalled by any other sprayer at any price. The DOME-TOP is constructed on an entirely new and revolutionary principle. It has no nozzle to clog or get out of adjustment. It gives unbelievably fine break up to the spray. It is 100% trouble free. It can be depended on to spray as efficiently the last day it is used as it will the first day.

Lowell Metal Products Co.
LOWELL MICHIGAN

Trade Commission In Drive On Sanitary Product Claims

OVER recent months the U. S. Federal Trade Commission has been unusually active in proceeding against manufacturers of insecticides, polishes, deodorants, disinfectants, antiseptics, washing fluids, shampoos, etc., who make false or unduly optimistic claims in the advertising of their products. Within the course of the past month, alone, the following actions have been concluded with the signature by the concerns mentioned of stipulations in which they agree to refrain from further use of the practices complained against:

Crown Products Corporation, 1237 Minnesota St., San Francisco, agrees to discontinue advertising that "Sani-Clor" kills germs, is a sterilizer, or destroys odors, unless the latter representation is limited to the destruction of odors by application at the source of the odor or upon the object from which it emanates. The corporation also will cease representing that "Sani-Clor" is a disinfectant, unless directions are given for first cleansing the surface to be disinfected and then thoroughly wetting such surface with a proper solution of the product.

Tressol Laboratories, Maplewood, N. J., in selling "Tressol" shampoo, agrees to stop using representations to the effect that the product contains no soap, when it does have ingredients which are recognized to be soap; that shampoos which contain alcohol are drying to the hair when such shampoos, necessarily being diluted with sufficient water, do not have such drying effect; that the respondent's preparation contains oil, when this is not true, and that use of the product as a hair shampoo will promote the growth of hair, when such is not a fact.

James Austin Co., Pittsburgh,

will stop representations that "Austin's A-1 Solution" will disinfect cuts, wounds, and insect bites; that when used for laundering clothes the use of bluing will not be necessary, and that the product will serve as a disinfectant for household purposes, unless such claim is qualified by the direction that the articles to be disinfected must be thoroughly washed or cleansed before application of the solution.

Pacific Coast Borax Co., Los Angeles, selling "20-Mule Team Borax," will desist from representing that the product will destroy all odors, banish insect pests and cure athlete's foot.

Mercirex Co., Milford, Del., selling "Mercirex Cream and Mercirex Soap," will stop asserting that its products are competent for treating psoriasis, eczema, acne, external rashes and other skin disorders and that it will help restore the skin to a normal, healthy condition. In its stipulation, the respondent admits that its treatment cannot be relied upon as a competent treatment for such conditions.

Britelite Co., Greenfield, Mass., will discontinue representing that "Brite-Lite" polish restores antiques, brass and pewter ware, and other articles to their original luster or brightness, and "makes old things new." The concern also will cease representing that sales agents are assured of repeat orders, or that any territory is open to them.

Arwell, Inc., 1119 Glen Rock Ave., Waukegan, Ill., agrees that in the sale of insecticides known as "Arwell," "Arwellex" and "Arwell-mist," it will not represent that any of these products will "free the camp of insects" or banish odors, or that if these preparations are used, one will not be bothered by flies or mosquitoes.

Popular Brands, Inc., 614 Superior Ave., Cleveland, will discontinue representing that its "Sani-Clor" washing fluid kills germs, sterilizes, or destroys odors, unless this representation is limited to the destruction of odors by application of the fluid at the source of the odor, or upon the object from which the odor emanates. The company also will cease making assertions that "Sani-Clor" is a disinfectant, unless directions are given that the surface or area to be disinfected must first be cleansed and then thoroughly dampened with a proper solution of the product.

Cosmos Chemical Corporation, 81 Washington St., Boston, selling "Sanovan," a deodorant, stipulates that it will stop advertising that this product will permanently rid any place of any odor. The company admits that although the preparation is a deodorant while being used, it will not protect against recurrence if the source of the odor is not removed. The respondent company will not represent "Sanovan" as being the only deodorant capable of completely eliminating odors.

Lockhart Drug Store, Inc., Lockhart, S. C., will stop representing that "Red Star Liquid" and "Red Star Ointment" are competent treatments for the various forms of eczema, ringworm, athlete's foot and itch, unless such representations are limited to palliative relief from itching and burning.

Vapoo Products Co., New York, maker of "Vapoo" rug and carpet cleaner, agrees to cease use on the labels of its product of the phrase "highest award 1934" or "Gold Seal Award Chicago 1934" in connection with the words "Century of Progress International Exposition" so as to imply that the product received an award by the Exposition, when such is not the fact.

Check Washing Fluid Claims

A series of stipulations have been signed by four firms selling washing fluids, at the instance of the U. S. Federal Trade Commission, under which the firms agree to cease the

INSECTI-SOL

The Perfect Insecticide Solvent



*...permanently
odorless!*



This sample of INSECTI-SOL, taken from a batch manufactured in January, 1936, is still completely odorless,—after a year and a half. INSECTI-SOL stands up indefinitely and remains crystal clear, with no "tell-tale" kerosene odor. Finished insecticides made with this base may safely be kept in stock with no change from their original odorless character. This *permanently* odorless product is the ideal base for your own liquid insecticide.

PENNSYLVANIA REFINING COMPANY

Executive Offices — BUTLER, PENNA.

Refineries at Titusville and Karns City, Penna.

Gone....

...is the "Jack-of-all-Trades"—

... to be replaced by the fellow who does one job and does it well. . . . and more important, knows what he is doing.

And going fast in the field of trade paper publishing is the "Jack-of-all-Trades" publication which "covers the world" . . . which reaches the butcher, the baker, and candlestick maker, or anybody else a prospective advertiser might want to reach . . . that is as long as the imagination of the advertising solicitor holds out.

Common sense tells us that no one trade publication can cover the whole field of chemicals, drugs, cosmetics, soaps, insecticides, disinfectants, perfumes, cigars, cigarettes, and chewing gum . . . and know what it is doing . . . or be able to include even a small degree of authoritative editorial intelligence . . . no matter what kind of claims (always without proof) are made by advertising solicitors.

SOAP does not "cover the world." It offers to advertisers an honest and genuine circulation in the field of soaps, insecticides, and allied sanitary specialties, . . . a circulation backed by membership in the A.B.C. (Audit Bureau of Circulations). SOAP is also a member of the Associated Business Papers.

*

MAC NAIR - DORLAND COMPANY, Inc.

Publishers

254 WEST 31st STREET NEW YORK CITY

use of false and misleading claims in the sale of their products.

Suntex Chemical Co., Philadelphia, agrees to cease advertising that "Suntex" sterilizes; that it disinfects, unless such representation is limited to indicate that the product is a disinfecting agent when used as directed, and to stop representing that its use for laundering purposes obviates the necessity for rubbing the clothes laundered.

Wonder Chemical Co., Bethlehem, Pa., agrees that in the sale of "Bleach-Ox" they will discontinue representing that the product is a sterilizer, a germicide and harmless, and that it is a disinfectant, unless, in the latter instance, specific instructions are given to indicate that the places or objects to be disinfected are to be cleansed before application of the solution.

Hilex Co., St. Paul, selling "Hi-Lex," will discontinue assertions that the product disinfects, unless directions are given to first cleanse the surface to be disinfected; that it removes stains, unless this claim is limited to most stains or certain indicated stains, and that it destroys odors, unless such representation is qualified to mean the destruction of odors by application of the product at the source of the odor or upon the object from which the odor emanates.

Double DD Products Co., Wesleyville, Pa., agree to stop advertising that when their product "Snowwhite" is used "stains are no longer stains," unless such representation is limited to removable stains and refers only to cotton and linen fabrics; that the product contains no harmful ingredients, and that it is effective when used for hygienic purposes on nursery utensils, general household ware, tile, enamel, linoleum and woodwork, unless directions are given for first cleansing the surface of the article before "Snowwhite" is applied.

Killer Products Moves

Killer Products Co., sanitary supply manufacturer, moved recently from 540 S. Front St., Columbus, O., to 907 S. Front St.

Dr. Max O. Reimann Dies

Dr. Max O. Reimann, head of Oriental Exterminating Co., New York, died June 14, 1937. The business will be carried on under the direction of Mrs. M. Wilkes.

Move Powell Coast Office

John Powell & Co., New York, announce that as of July 1st the office of their Pacific coast representative, Esler Johnson, was moved to the Cunard Building, 503 Market Street, San Francisco.

Associated Exterminators Meet

A regular meeting of the Associated Exterminators and Fumigators of New York was held June 14 in the General Motors Building. The changes in the newly amended section 104 of the New York Sanitary Code were discussed and suggestions were made as to further desirable modifications. A special committee was named consisting of E. N. Sameth, president of the association, Col. Leopold Philipp and Irving Josephson to interview candidates for the position of executive secretary of the group. The next scheduled meeting of the association is 3:00 P. M., July 12.

Wilson & Bennett Enlarge Plant

Wilson & Bennett Mfg. Co., steel container manufacturers, are currently adding two new three-story

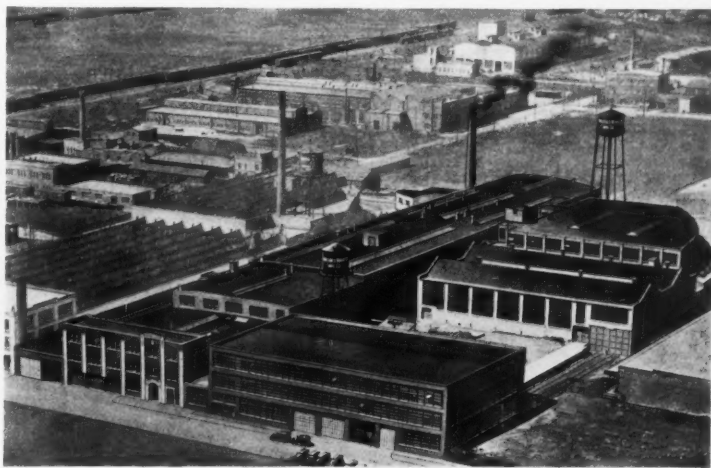
buildings and a third floor addition to their Chicago plant. These new buildings will provide over 116,480 square feet of additional space that will be used for new production lines, increased warehousing and shipping facilities. Machinery and equipment costing over \$200,000 will be installed. These new facilities are expected to be ready for use about August 1st. When completed, steel pail production capacity will be increased by over 50 per cent. This expansion will also provide greatly increased flexibility in the steel barrel department, making it possible to increase barrel production quickly.

William Chemical Moves

William Chemical Co., soap and sanitary supply manufacturer, occupies new headquarters at 555 N. W. Fifth St., Miami. The concern was formerly located at 337 N. E. Second Ave.

D. & O. Join N.A.I.D.M.

Dodge & Olcott Co., New York, perfuming material house, has recently become an associate member of the National Association of Insecticide and Disinfectant Manufacturers. The following firms have changed the corporate name of their membership: Wizard, Inc., Chicago, to Midway Chemical Co.; and Penn-Champ Laboratories, Butler, Pa., to Pennsylvania Refining Co.

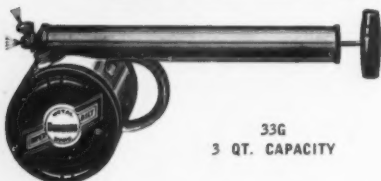


Wilson & Bennett add 116,000 sq. feet of floor space to their Chicago plant.

THESE DOBBINS *Superbilt* SPRAYERS



35G
3 QT. CAPACITY



33G
3 QT. CAPACITY



43G
3 QT. CAPACITY

WILL MAKE YOUR PROFITS
AND YOUR SALES COSTS

A good product can lose its effectiveness and reputation through improper application. Assure increasing profits and the success of your product by the use of Dobbins Superbilt Sprayers.

The 35G. A high pressure sprayer with patented features. Give this sprayer a test and be convinced that it is the finest chemical sprayer on the market.

The 33G. A continuous sprayer that is continuous in its good results. Will handle all oil sprays, chemicals, disinfectants and insecticides. Try it with yours.

The 43G. Are you looking for a double-duty sprayer? Here is one that can be used as a continuous or pressure sprayer.

The No. 10. For ease of operation and real economy in applying floor oils, use the No. 10. A sprayer designed for years of good hard service.

For more complete information write today for circulars and catalog No. 44.



No. 10
1 1/2 GAL. CAPACITY

UP
GO
GO
DOWN

DOBBINS MANUFACTURING CO.
NORTH SAINT PAUL MINNESOTA

DISINFECTANTS	INSECTICIDES	POLISHES
PINE OIL DISINFECTANTS COAL TAR DISINFECTANTS PINE ODOR DEODORANT TECHNICAL CRESOL COMPOUND KLEEN AIRE FORMALDEHYDE SPRAY CHLORINE FORMALDEHYDE SPRAY ETC.	FLY SPRAYS MOTH SPRAYS CATTLE SPRAYS PHENOL INSECTICIDES PERFUMED INSECTICIDES BED BUG SPRAY ROACH POWDER ETC.	METAL POLISH FURNITURE POLISH CHROMIUM CLEANER AND POLISH FURNITURE CREAM FLOOR OIL ETC.

"YOUR MOST LOGICAL AND ECONOMICAL SOURCE OF SUPPLY"
WRITE FOR OUR PRICE LIST AND CATALOG

THE CHEMICAL SUPPLY COMPANY
2450 CANAL ROAD
CLEVELAND OHIO

"Since 1898"

Puritan Holds Sales Meeting

Expansion of the Atlanta plant of Puritan Chemical Co. to include a new unit for the manufacture of abrasive cleaners was announced at the recent conference of the company's sales representatives held last month at the home office. A. L. Feldman, president of Puritan Chemical Co., was in general charge of the sales meeting, which was attended by 24 Puritan representatives who cover the entire south. The Puritan line consists of textile, industrial and commercial chemical and cleaning supplies, as well as disinfectants and the new abrasive cleaners.

Proprietary Assn. Elects

George H. Miller was elected president of the Proprietary Association at the recent annual meeting, to succeed the late Frank A. Blair. Mr. Miller is secretary-treasurer of Musterole Co., Cleveland. Dr. V. Mott Pierce, president of Worlds Dispensary Medical Association, was named honorary vice-president. Henry P. Bristol, of Bristol-Myers Co., was chosen first vice-president; Charles S. Beardsley, of Dr. Miles Laboratories, Inc., second vice-president; R. L. Lund, of Lambert Pharmacal Co., third vice-president. Charles P. Tyrrell, Syracuse Medicine Co., was made secretary-treasurer.

Applications for Ti-tree Oil

Ti-tree oil is a nontoxic, non-irritant germicide. It is distilled from the leaves and twigs of a tree which grows in New South Wales, and should not be confused with lemon-scented ti-tree oil. The latter is bright yellow and has a pungent lemon odor, while ti-tree oil itself is pale yellow to almost colorless and has a spicy type of odor reminiscent of nutmeg and camphor.

For use in theater sprays and household antiseptics in place of pine oil preparations, a suggested formula is 1 part of oil to 30 parts of water, together with a sufficient amount of a suitable emulsifying agent such as sulfonated castor oil. A soap containing 2-2.5 per cent of



ti-tree oil can be used in place of phenol soap. Australian germicidal preparations and soaps containing phenol have been almost entirely replaced by those containing ti-tree oil. K. N. Richardson. *Soap, Perfumery & Cosmetics* 10, 423-4 (1937).

Wants Insecticide Agency

A concern in Manila, P. I., is interested in securing an agency for sale of powdered insecticides of American manufacture. Further details can be obtained by addressing the U. S. Bureau of Foreign & Domestic Commerce, mentioning inquiry No. 3379.

Michigan Exterminators Elect

H. G. Ackercall of Twin City Fumigating Co., Detroit, was elected president of the Michigan Association of Exterminators and Fumigators at a recent meeting held in Detroit. Other officers are as follows: Arthur Goulet of Reliable Fumigating Co., Detroit vice-president, N. R. Van Auken of J. J. Carroll Co., Detroit, treasurer, and W. B. Gram, secretary. The Michigan Association voted in favor of changing the name of the National Association to the National Pest Control Association.

Clark Columbia Representative

Vernon L. Clark has just been made district sales manager for Columbia Alkali Corp. at St. Louis with offices at 1106 Central Industrial Avenue. Mr. Clark, originally from New York City, has been located in the middle west since 1929 engaged in the alkali business. He established Clark Chemical Co. at Indianapolis who are distributors for Columbia

products as one of their major interests. Clark Chemical Co. is still in operation, although Mr. Clark severed his connections with it before joining the Columbia organization.

Bathed With "Baby-San"

Amos Edison Baedertscher, Jr., son of Dr. A. E. Baedertscher,



The Newest Baedertscher

chief entomologist of McCormick & Co., Baltimore, already had at the early age of five months a better stand of "head grass" than his renowned father. Doc ascribes this to regular treatments with Jake Brenn's "Baby-San." The youngster, who is now eight months old, is being trained to be left-handed, so he will make a good ball player when he grows up. He is well capable already of identifying *Musca domestica* and will start next week running Peet-Grady tests to acquire the proper 100 per cent technique.

John Flocker Co., 955 Liberty Ave., Pittsburgh, has moved to 644 Grant St., Pittsburgh 22. The concern manufactures janitor supplies.

The June Convention

THE National Association of Insecticide & Disinfectant Manufacturers held one of the most successful meetings in its history early last month. Registration far exceeded that at any previous early summer convention. Interest in the general problems confronting the industry continues to mount. Legislative matters came in for considerable discussion. So did the technical phases of the business with special reference to standards.

This issue of SOAP carries a complete description of the meeting along with a number of papers and reports. The balance will appear in August. If you were not one of those who took an active part in the convention perhaps this report may help persuade you to join with us. If you are a manufacturer of insecticides, disinfectants or related sanitary and chemical products you are eligible for active membership. If you sell these manufacturers you may become an associate member. Write to the secretary's office for membership information. Find out why most of the leading firms in the industry are in this organization.



*National Association of
Insecticide & Disinfectant Manufacturers, Inc.*

John H. Wright, Secretary

122 East 42nd Street

New York

Insecticide Navy Embarks

Pictured herewith are the captain, cook, and crew of the cruiser, "Panamin," which recently returned from a ten-day voyage along the coast and among the Canadian Islands of Northern Lake Huron. Left to right, they are John Powell of John Powell & Co., New York, chief deck hand; Samuel Bell of the S. H. Bell Co., Pittsburgh, chief cook, chef, and lord of the galley; H. Marshall Clark of Dr. Hess & Clark, Inc., Ashland, O., captain, owner of the "Panamin," and director of operations; L. J. LaCava of the Continental Can Co., New York, first-mate, chief bos'n, and interpreter. Much time was spent in fishing, and the daily menu, according to Mate LaCava, consisted chiefly of fried fish, boiled fish, baked fish, filet de sole, and just plain fish. Considerable research work was done by the crew in the outdoor control of mosquitoes by the use of fly sprays. Interesting side trips among the Indian reservations of Canada were led by Mr. LaCava, who is well-versed in Indian lore and who acted as interpreter. In conjunction with the grandson of the chief of the Manatoulan tribe of Manatoulan Island, Ont., Little Chief Running Nose, Mr. LaCava arranged for a series of interpretive Indian dances to be staged for the crew. The start and finish of the cruise was at Cheboygan, Mich., where Capt. Clark berths his boat.

Register "Dix-O-Shine"

The new trademark for a cleaning preparation recently registered with the U. S. Patent Office by Dixie Disinfecting Co., Dallas, Texas, is "Dix-O-Shine" and not "Dis-O-Shine" as reported in the June issue of SOAP.

Cowan Cellophane Ad. Mgr.

John M. Cowan has just succeeded D. W. Meserve as advertising manager of the "Cellophane" Division of E. I. du Pont de Nemours & Co. Mr. Cowan has recently been with the sales promotion division of the company. Prior to joining du



Capt. "Jim" Clark (third from left) and the crew of the "Panamin".

Pont, Mr. Cowan was with Certain-Teed Products Corp.

Holzapfel Bank Director

Louis Holzapfel, Sr., president of the Sanco Products Co., Greenville, Ohio, manufacturers and dis-



tributors of sanitary specialties and janitor supplies, has been elected a member of the board of directors of the Farmers' National Bank of Greenville. Mr. Holzapfel is well known in the sanitary supply trade and a large realty operator in Darke County, Ohio.

F. T. C. Cites Crown Labs.

The U. S. Federal Trade Commission has issued a complaint of unfair competition under date of June 7 against Crown Laboratories, Rex Merchandise Corp. of America, Sheray, Inc., and Wilshire Sales Corp., all of New York. These con-

cerns are alleged to have entered into an agreement to sell tooth paste, shaving cream and other toilet articles marked with fictitious prices and advertised in a false and misleading manner. The claim has also been made that all four concerns are manufacturers, the complain states, when in fact only Crown Laboratories is a manufacturer. Further items in the complaint charge that domestic perfumes are advertised as imported, and that the initials "D.D.S." are used improperly on a tooth powder.

Temple Transfers Zimmern

Temple Lumber Co. has announced the transfer of Alfred Zimmern from Corpus Christi, Texas, to Dallas, where he will take over the active management of the Dallas termite division of the company.

F. T. C. Checks "Ipana" Claims

Bristol-Myers Co., New York, has just signed a stipulation with the U. S. Federal Trade Commission agreeing that in the sale of its "Ipana" tooth paste the concern will cease advertising that this preparation and massaging will correct any unhealthy gum condition; that "Ipana" and the use of a tooth brush will restore to the gums the stimulation they need to remain firm and healthy; that modern dental science or the country's dentists urge or approve the use of "Ipana" and massaging in the care of teeth and gums, and that "Ipana" and massaging will prevent one from becoming a "dental cripple."

"Bright Beauty"

SELF POLISHING WAX

- ★ EASY TO APPLY
- ★ FREENESS FROM STREAKS
- ★ QUICK DRYING
- ★ BEAUTIFUL LUSTRE
- ★ NO SLIPPERINESS
- ★ LIGHT COLOR
- ★ PLEASING ODOR
- ★ DURABILITY
- ★ PERFECT EMULSION
- ★ WATER RESISTANCE

We want this wax to speak for itself. Send for SAMPLES to be inspected and tested to prove the merits of Bright Beauty Self-Polishing Waxes. Prices surprisingly low. Quotations on inquiry.

All products sold under private labels only. We are in a position to furnish beautiful plate-style 3-color varnished labels with your brand and firm name.

CANDY & COMPANY, INC.

2515 W. 35th STREET
CHICAGO, ILL.

WAX SPECIALISTS FOR OVER 40 YEARS

ISCO REFINED WAXES

CARNAUBA and CANDELILLA

• Flake and Lump forms
Easily cut and saponified

• ZINC OXIDE

White Seal—U. S. P.
Also Gold, Green and Red Seals.
Vielles Montagne Lightest, Whitest and
Purest to be had.

• CAUSTIC POTASH

Flake • Solid • Granular • Broken
Walnut • Liquid • Various Packages

• CARBONATE OF POTASH

Calcined • Hydrated • Liquid
98/100% 83/85% 47/48%

• CAUSTIC SODA

Our own manufacture
Flake • Crystal • Solid • Liquid
Various size packages

• CHLORIDE OF LIME

(Bleaching Powder)
33/37% available chlorine

• LANOLIN

• GUMS

• OLEIC ACID

• AQUAPHIL

INNIS, SPEIDEN & Co.

Manufacturers and Importers

117 Liberty Street New York

BOSTON • PHILADELPHIA • CLEVELAND • CHICAGO
GLOVERSVILLE, N. Y.

FACTORIES: JERSEY CITY, N. J., NIAGARA FALLS, N. Y.

Sanitary Supply Association

Elects E. A. Stanford

AT the fifteenth annual meeting of the Sanitary Supply Association, held June 3, 4 and 5 at the Morrison Hotel, in Chicago, E. A. Stanford, City Janitor Supply & Brush Co., St. Louis, was elected president. He succeeds Walter R. Hills, Masury-Young Co., Boston. Other officers include Robert Johnson, Nashville Products Co., Nashville, Tenn., vice-president; S. J. Bockstanz, Bockstanz Bros., Detroit, treasurer, and Ed Kratsch, publisher of *Janitation*, secretary. Directors representing the active members are Ellis Davidson, Ellis Davidson Co., New York; Vince Mider, U. S. Chemical Co., Greenville, Ohio, and Mr. Hills. Joseph Hentz, Procter & Gamble, Cincinnati; Thomas Galvin, Armour & Co., Chicago; M. L. Magee, T. F. Washburn Co., Chicago, and Fred Palmer, Palmer Products, Inc., Milwaukee, are directors representing the associate members.

A feature of the meeting was the exhibits which occupied space around the wall and at the rear of the convention room. First prize was awarded the exhibit of Fuld Brothers, Baltimore, manufacturers of bulk and private brand soaps and sanitary chemicals for the jobbing trade. Brother Joe was in charge of the display, which included samples of their various products with a revolving centerpiece as the main feature. Second prize went to Haag Laboratories, Chicago, also manufacturers of soaps and sanitary products. Their exhibit was in charge of V. W. Haag, president of the firm, who was assisted by J. P. Sterling and K. H. Murray. Rubon Mfg. Co., of Kansas City, Mo., had a display of mops and furniture polish which took third honors. Other exhibitors and their products included the following: Breuer Mfg. Co., Chicago, electric sprayers, with A. A. Breuer

and C. A. Bremmer in attendance; Armour Soap Works, Chicago, with T. M. Galvin in charge of their display of soaps; F. H. Lawson Co., Cincinnati, metal waste baskets, sand urns, garbage pails, etc., with E. G. Harvey in charge; Candy & Co., Chicago, floor products, with Al Candy, R. M. Lockhart and H. F. Brooks at the display; Schroeder & Tremayne, sponges and chamois, with W. C. Schroeder showing their line, including one of the first crop of Nassau cultivated sponges; Economy Mop Wringer Co., Chicago, mop wringers shown by Jack Superfine; J. B. Ford Co., Wyandotte, Mich., detergents; White Mop Wringer Co., Fultonville, N. Y., with Lee N. Vedder in charge of their display of wringers, mopping tanks and mop holders; Ellis Davidson Co., New York, perfume disseminators, with the exhibit presided over by Ellis Davidson; D.

P. A. Sales, Inc., New York, steam sprayers; Southern Mills Corp., scrub mops; Certified Chemical Co., carpet cleaning machines; Paper Makers Chemical Co., Kalamazoo, Mich., display of soaps and sanitary products in charge of B. Strickling and T. Watson; Palmer Products, Inc., Milwaukee, with copies of catalogs, leaflets, etc., shown by Fred Palmer; S. C. Lawlor Mfg. Co., Chicago, floor machines displayed by A. P. Boller; T. F. Washburn & Co., Chicago, floor products, with exhibit in charge of M. L. Magee.

The convention voted to meet in Pittsburgh next year. Although the exact date has not yet been set, there was considerable sentiment in favor of having the gathering earlier, possibly in January.

Dewey & Almy Building

Dewey & Almy, manufacturers of water softeners, are constructing a new factory at Ville La Salle, near Montreal, Canada. The estimated cost is \$60,000 and the building when completed will provide 18,000 square feet of floor space. The new plant will be ready for operation this fall.

Wilson & Bennett Annual Banquet

Annual Banquet for the Chicago staff of Wilson & Bennett Mfg. Co., given recently at the Hotel Shoreland, Chicago. An important feature of the evening was the award-

ing of seniority rings to men who have been with the company for ten years or more. The awards were made by S. A. Bennett, president of the concern.



LOWELL SPRAYERS *Eliminate Blind Spot Spraying*

The diagram shows poorly atomized spray, notice the wasted blind spots—and compare with solid atomized mist in NU-ACTION sprayers!



The blind spot in sprayers is that area between the poorly atomized drops without killing power.

The LOWELL NU-ACTION Sprayers send a high powered finely atomized mist that produces a compact spray of uniform killing power. The blind spot is eliminated.

LOWELL MANUFACTURING CO.

North Pier Terminal
Opp. Navy Pier
Chicago, Ill.

Lowell, Mich.



**LOWELL
NU-ACTION SPRAYER**

Sprayer experts and just ordinary folks are more than enthusiastic over the LOWELL NU-ACTION new highly atomized power.

F. & S.

Quality Colors
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TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

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- Use of pyrethrum in live stock sprays and horticultural dusts and sprays.
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STATIONARY INSTALLATION

"FUMERAL" INSTANT DIFFUSER

For the instant diffusion and powerful circulation of various brands of fly sprays, insecticides, deodorants and fumigants.

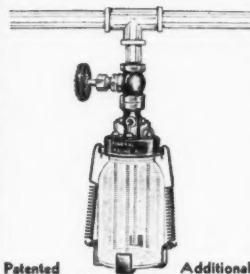
Safe, modern sanitation, insect, vermin and rodent control for dairies, ice cream and cheese factories, bakeries, confectionaries, flour, cereal and food mills, packing plants, sausage factories, refrigerators, office buildings, store rooms, ocean liners, paper mills and thousands of various industries.

At the left shows how Fumeral instant diffusers are permanently installed. There are no moving parts, nothing to get out of order, no electricity to fuss with. Pressures from 30 to 200 pounds may be used. No adjustments are required. Each Fumeral unit will take care of 10,000 cubic feet of space. Fumeral does a thorough job—it is inexpensive—efficient and most economical. Thousands in service from coast to coast.

FUMERAL COMPANY
RACINE, WIS.

Manufacturers of Fumeral Stationary and Portable Diffusers

FUMERAL PRESSURE SYSTEM
CONNECTS TO STEAM OR
AIR PRESSURE LINE



Patented
Sept. 18, 1934

Additional
Patents Pending

ANYONE CAN INSTALL IT

On English Fly Sprays

In response to a communication published in SOAP from W. Merritt of Stafford Allen & Sons, Ltd., London, the following letter has been received from Jeyes' Sanitary Compounds Co., Ltd., also of London. The letter from Mr. Merritt was received following publication of an article by Lawrence Allport of London in which he decried the lack of standards for insecticides on the English market.

"The article appearing in the March issue of "Soap" entitled "Fly Sprays and Other Insecticides on the English Market" by Lawrence Allport of London, and the subsequent reply this evoked from Mr. W. Merritt of Stafford Allen & Sons, Ltd., have interested us considerably. We are to a large extent in agreement with the statements made by Mr. Allport, so much so that it has been widely rumored that the article in question was inspired by this company! This, of course, is entirely untrue, and we have no knowledge as to the identity of the writer.

"We would like to suggest, however, that you inform Mr. Allport of our views, and if he would like to communicate with the undersigned we should be very pleased to meet him with a view to discussing the possibility of some action along the lines he suggests, i. e., the standardization of raw materials, minimum standard for the finished sprays, and penalties for mis-statements. The undersigned was recently on a visit to the U.S.A.—as a matter of fact during February-March—and as this fact was fairly well-known on this side, it seems to have strengthened the view that we were responsible for the authorship of Mr. Allport's contribution to your valued journal."

R. & H. Canadian Agent

P. N. Soden Co., 442 Victoria Ave., Lachine, P. Q., Canada, has been named Canadian selling agent for "Lethane 384" product of Rohm & Haas Co., Philadelphia.

Floor Wax Group Organizes

Adoption of a constitution and by-laws was effected, June 10, at a meeting of the newly organized Floor Wax Association, held at the Hotel Pennsylvania, New York. Election of permanent officers and appointment of committees will take place at a meeting scheduled for early in July. In the meanwhile a membership committee has been functioning under the chairmanship of Carl Schwank, R. M. Hollingshead Corp., Camden, N. J., assisted by Edwin T. McMahon, American Wax Co., College Point, L. I., N. Y., and Russell H. Young, Davies-Young Soap Co., Dayton, Ohio. It was hoped to acquaint all eligible firms with details about the new group before permanent officers are elected. Individuals interested in attending

the July meeting should contact J. E. Stevens, 381 4th Ave., New York, to learn the exact date. Mr. Stevens is serving as executive secretary of the new organization.

Polak & Schwarz Head Dies

Albert Schwarz, manager of Etablissements Polak & Schwarz, Paris, France, office of Polak & Schwarz's Essencefabrieken, Zaandam, Holland, died recently at his home in Asnieres, France.

Drug Golf Outing Sept. 17

The annual fall meeting and golf tournament of the Drug, Chemical and Allied Trades Section of the New York Board of Trade will be held at Buckwood Inn, Shawnee-on-Delaware, Pa., September 17 and 18.



Royal Manufacturing Company of Duquesne, Penna., presents "Bugine", their liquid insecticide spray in a new vivid red and yellow container by the National Can Company.

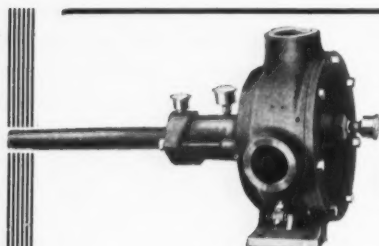


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of convenient and proper application of floor waxes, seals and varnishes. You can be sure that your products are being used correctly by selling or recommending the HOLZ-EM WAX APPLICATOR and SPREADER to do the job. Designed by experts, made of the best materials, the HOLZ-EM will help build your list of satisfied customers just as it has done for others who are already familiar with the product.

We manufacture a complete line of wool applicators, cotton dust mops and cotton wet mops. For prices and samples write

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**SOAP
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Soap liquors, greases, lotions, and wax are easily and efficiently handled with the Viking Standard Pump. Standard units are available in all sizes from 2/3 to 1,050 G.P.M. Here is the pump that enjoys "first choice" with the industry. Viking Standard Pumps can solve your pumping problems. Write for bulletins.

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Liquid Soap Base
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U. S. P. Green Soap
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Coal Tar Disinfectants
Pine Oil Disinfectants
Insecticides
Liquid Floor Wax

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Shampoo Base

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Ask for samples
of above specialty
bulk products.

for low cost in para block manufacture



These two practical machines are all you need to produce high quality para blocks or cakes. The small machine will thoroughly mix all ingredients. The large machine will compress the mixture into any shape dies can give.

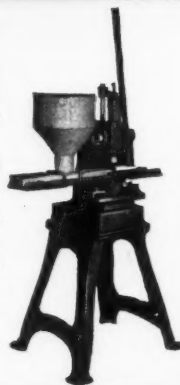
In addition, the mixer, when made of monel metal, can be used on other dry products such as roach powder, cleansers, bath salts, etc. It will also give a smooth, soft and velvety texture to creams.

The hand lever press has more power than cheap foot presses. Inexperienced operators can rapidly turn out fine looking blocks. Send us some of your material and let us show you some specimen cakes. The press will save from 10% to 20% over the hot process.

HUBER MACHINE CO.,

265 46th St., Brooklyn, N. Y.

Makers of Good Soap Machinery for Forty Years



1937 Annual Insecticide-Disinfectant Meeting New York, December 6-7

The 24th annual meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held at the Hotel Biltmore, New York, on December 6 and 7. These are the tentative dates and place selected by the committee composed of John Powell, chairman, A. L. van Ameringen, Ira P. Mac Nair, and Secretary John Wright. Both are subject to approval by the Board of Governors of the Association. The annual meeting will extend for two days as usual and will be preceded by the annual meeting of the Governors on Sunday evening, December 5, preceding.

Ransford Issues Folder

Ransford Insecticide Co., Worcester, Mass., has just issued a folder designed to produce inquiries for its exterminating service. The front cover carries an illustration of Adam and Eve in the well-known garden, with Adam slapping at mosquitoes. Inside is a verse "Adam Had 'em" which goes as follows:

He had no pants nor B V D's
To harbor ants or friendly fleas;
No cozy cloth nor ritzy ermine
To nourish moth and shelter vermin;
No main approach, no mother's pies
To beckon roach and fertile flies;
No kitchen vats, no open-house
For raiding rats and mooching mouse;
No beds for bugs, no jobs for germs.
No Welcome rugs for wandering worms.

The sales story appears in the line "Adam never called us in. Nowadays folks do".

Hotel Sanitation Survey

A survey of the market for sanitation products in the hotel and restaurant field has just been published by Ahrens Publishing Co., New York. The market is analyzed and evaluated, sales outlets and buying influences are reviewed, and particular attention is given to the considerations that influence buyers in this field in the selection of their sanitary supply purchases.

Trade Marks Granted

(From Page 53)

347,330. Cleaning Compound. Brite X Co., Colfax, Wis. Filed January 27, 1937. Serial No. 388,240. Published April 6, 1937. Class 4.

347,332. Chemical Tablet for Deodorizing. Vase-Sweet Co., Marion, Ind. Filed January 28, 1937. Serial No. 388,256. Published March 30, 1937. Class 6.

347,336. Antiseptics. L. C. Palmer, Washington, D. C. Filed January 28, 1937. Serial No. 388,277. Published March 30, 1937. Class 6.

347,337. Moth Proofing Spray. U. S. Antiseptic Laboratories Corp., Baltimore. Filed January 28, 1937. Serial No. 388,289. Published March 30, 1937. Class 6.

347,342. Foot Soap. Stanis. Chicago. Filed January 30, 1937. Serial No. 388,374. Published April 13, 1937. Class 4.

347,343. Flushing Powder. Derris, Inc., New York. Filed February 1, 1937. Serial No. 388,390. Published April 6, 1937. Class 4.

347,355. Shoe Cleaner. Louangel Corp., New York. Filed February 5, 1937. Serial No. 388,579. Published April 6, 1937. Class 4.

347,371. Soap. Ferd. Mulhens, Inc., New York. Filed February 11, 1937. Serial No. 388,791. Published April 6, 1937. Class 4.

347,384. Soap. McCoy, Jones & Westlake, Inc., Chicago. Filed February 15, 1937. Serial No. 388,950. Published April 6, 1937. Class 4.

347,389. Polish. Mirpo Products Mfg. Co., La Porte, Ind. Filed February 17, 1937. Serial No. 389,044. Published April 13, 1937. Class 4.

347,402. Liquid Wax. Davies-Young Soap Co., Dayton, Ohio. Filed February 19, 1937. Serial No. 389,121. Published April 13, 1937. Class 16.

347,416. Wax Polish. Minnesota Mining & Manufacturing Co., St. Paul, Minn. Filed March 4, 1937. Serial No. 389,656. Published April 13, 1937. Class 16.

Household Ammonia

(From Page 32)

water itself is hard, the addition of more lime may aggravate any curdling tendency. Trouble can usually be expected when using lime water.

If cloudy ammonia made with soap curdles and the curd floats, it indicates that during preparation the stearic and oleic acids were mixed with too little ammonia or at too low a temperature. Add the ammonia while the stearic acid and oleic acid are hotter. Stir more vigorously. Be sure you are adding ammonia to hot acid and not hot acid to ammonia. If the curd settles to the bottom, try using less stock solution thus forming a light cloud that will be less likely to curdle.

Costs

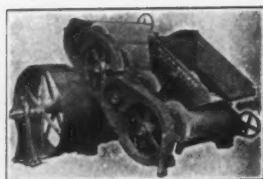
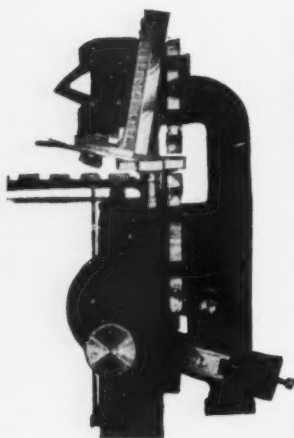
It is needless to say that ammonia bottling plants should be located near heavy consuming points. Otherwise, freights on full bottles will seriously cut into the profits. The following set of figures represent the approximate cost of bottles, labels, and transportation on a gross of quart size bottles of 15 degree Baume ammonia water.

One gross quart bottles.....	\$ 5.25
90 lbs. 26 degree Aqua Ammonia @ 3c per lb.....	2.70
One gross rubber stoppers....	.70
One gross labels.....	.60
Labor for bottling.....	1.50
Transportation	2.50

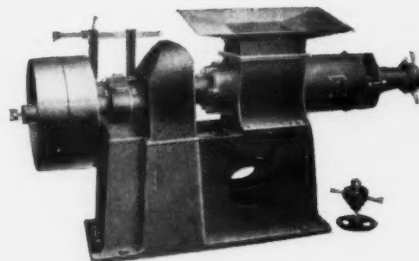
Total Cost per Gross

Delivered\$13.25

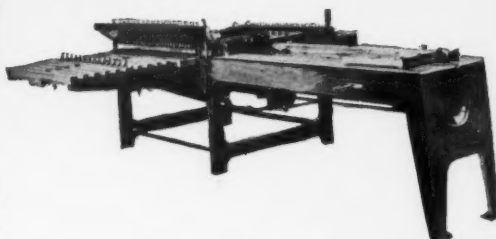
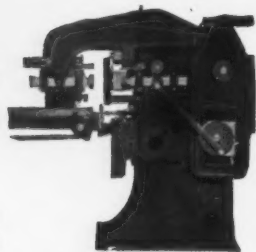
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H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



2 Automatic Power Soap Cutting Tables

Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.

4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.

NEW CRUTCHERS!



This Newman brand new, all steel steam jacketed soap crutcher. Will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap in addition to other new soap machinery such as frames, cutting tables, etc. Send for complete list.

ADDITIONAL REBUILT SOAP MACHINERY

All used equipment rebuilt in our own shops and guaranteed first class condition.

H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.

Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.

Ralston Automatic Soap Presses.

Scouring Soap Presses.

Empire State, Dopp & Crosby Foot Presses.

2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.

H-A 4 and 5 roll Steel Mills.

H-A Automatic and Hand-Power slabbers.

Proctor & Schwartz Bar Soap Dryers.

Blanchard No. 10-A and No. 14 Soap Powder Mills.

J. H. Day Jaw Soap Crusher.

H-A 6, 8 and 10 inch Single Screw Plodders.

Allbright-Nell 10 inch Plodders.

Filling and Weighing Machine for Flakes. Powders, etc.

Steel Soap frames, all sizes.

Steam Jacketed Soap Remelters.

Automatic Soap Wrapping Machines.

Glycerin Evaporators, Pumps.

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.

Perrin 18 inch Filter Press with Jacketed Plates.

Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.

Day Grinding and Sifting Machinery.

Schultz-O'Neill Mills.

Day Pony Mixers.

Gardiner Sifter and Mixer.

Proctor & Schwartz large roll Soap Chip Dryers complete.

Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.

Day Talcum Powder Mixers.

All types and sizes—Tanks and Kettles.

Ralston and H.A. Automatic Cutting Tables.

Soap Dies for Foot and Automatic Presses.

Broughton Soap Powder Mixers.

Williams Crutcher and Pulverizer.

National Filling and Weighing Machines.

Send us a list of your surplus equipment—we buy separate units or complete plants.

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